Instruction Manual
DNR300 SERIES

Instruction Manual
DNR300 SERIES

Thank you for purchasing this product. FLIR is committed to providing our customers with a high quality, reliable security solution.

This manual refers to the following models:

DNR300 Series

For the latest online manual, downloads and product updates, and to learn about our complete line of accessory products, please visit our website at:

www.flirsecurity.com/pro

WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN

WARNING: TO REDUCE THE RICK OF ELECTRIC SHOCK DO NOT REMOVE COVER. NO USER SERVICABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

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1 Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacturing process of your product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to ensure your enjoyment and proper use of the product and accessory equipment. Please read them carefully before operating and using your product.

1.1 General Precautions

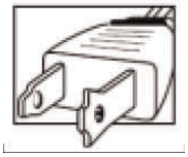
1. All warnings and instructions in this manual should be followed.
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water-dampened cloth for cleaning.
3. Do not use this product in humid or wet places.
4. Keep enough space around the product for ventilation. Slots and openings in the storage cabinet should not be blocked.
5. It is highly recommended to connect the product to a surge protector to protect from damage caused by electrical surges. It is also recommended to connect the product to an uninterruptible power supply (UPS), which has an internal battery that will keep the product running in the event of a power outage.

CAUTION

Maintain electrical safety. Power line operated equipment or accessories connected to this product should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

1.2 Installation

1. **Read and Follow Instructions -** All the safety and operating instructions should be read before the product is operated. Follow all operating instructions.
2. **Retain Instructions -** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings -** Comply with all warnings on the product and in the operating instructions.
4. **Polarization -** Do not defeat the safety purpose of the polarized or grounding-type plug.
   A polarized plug has two blades with one wider than the other.



   A grounding type plug has two blades and a third grounding prong.

   The wide blade or the third prong are provided for your safety.

   If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

5. **Power Sources -** This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your location, consult your video dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading -** Do not overload wall outlets or extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
7. **Power-Cord Protection -** Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
8. **Surge Protectors -** It is highly recommended that the product be connected to a surge protector. Doing so will protect the product from damage caused by power surges. Surge protectors should bear the UL listing mark or CSA certification mark.
9. **Uninterruptible Power Supplies (UPS) -** Because this product is designed for continuous, 24/7 operation, it is recommended that you connect the product to an uninterruptible power supply. An uninterruptible power supply has an internal battery that will keep the product running in the event of a power outage. Uninterruptible power supplies should bear the UL listing mark or CSA certification mark.
10. **Ventilation -** Slots and openings in the case are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the product manufacturer's instructions have been followed.
11. **Attachments -** Do not use attachments unless recommended by the product manufacturer as they may cause a hazard.
12. **Water and Moisture -** Do not use this product near water — for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.
13. **Heat -** The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.
14. **Accessories -** Do not place this product on an unstable cart, stand, tripod, or table. The product may fall, causing serious damage to the product. Use this product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

15. **Camera Extension Cables –** Check the rating of your extension cable(s) to verify compliance with your local authority regulations prior to installation.
16. **Mounting -** The cameras provided with this system should be mounted only as instructed in this guide or the instructions that came with your cameras, using the provided mounting brackets.

17. **Camera Installation -** Cameras are not intended for submersion in water. Not all cameras can be installed outdoors. Check your camera environmental rating to confirm if they can be installed outdoors. When installing cameras outdoors, installation in a sheltered area is required.

1.3 Service

1. **Servicing -** Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
2. **Conditions Requiring Service -** Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    - When the power supply cord or plug is damaged.
    - If liquid has been spilled or objects have fallen into the product.
    - If the product has been exposed to rain or water.
    - If the product has been dropped or the cabinet has been damaged
    - If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
    - When the product exhibits a distinct change in performance. This indicates a need for service.
3. **Replacement Parts -** When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the product manufacturer can prevent fire, electric shock, or other hazards.
4. **Safety Check -** Upon completion of any service or repairs to this product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the product is in safe operating condition.

1.4 Use

1. **Cleaning -** Unplug the product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
2. **Product and Cart Combination -** When product is installed on a cart, product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.
3. **Object and Liquid Entry -** Never push objects of any kind into this product through openings as they may touch dangerous voltage points or “short-out” parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
4. **Lightning -** For added protection of this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power line surges.

2 DNR300 Series Features

- Easy Connection and setup with 8 integrated PoE ports and auto-discovery of IP Cameras.
- Full HD 1080P recording provides the most detailed picture and reliable identification with selectable area digital zoom.
- Real-time recording: 240fps@1080p (8ch), 480fps@720p (16ch).
- Turbo recording bit rate of 160 Mbps.
- Dual streaming (H.264/MJPEG) and dual core processor.
- Pentaplex operation - simultaneous View, Record, Playback, Backup & Remote Monitoring.
- ONVIF 2.0 conformance ensures compatibility with popular industry IP cameras.
- Substream recording for bandwidth efficient remote playback.
- 64 Channel CMS by FLIR included.
- Fully PC / Mac compatible.
- Mobile apps: iPhone, iPad, Android.
- HDMI / VGA / BNC simultaneous video output.
- Free DDNS service by FLIR with secure redundant servers.
- RS-485 supports Pelco D & P PTZ.
- Audio I/O: 1 in - 1 out, Alarm I/O.
- Supports 2x SATA HDDs up to 3TB (6 TB total), 2x USB 2.0 ports.
- Embedded Linux operating system, simple GUI on screen display.
- 3 year warranty.

Note

Please visit www.flirsecurity.com/pro for information, firmware, and compatibility updates for mobile viewing.

The system comes with the following components:

Network Video Recorder

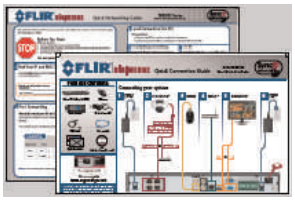
Power adapter x 2

(1 x for PoE Switch, 1 x for NVR)

Remote control

Mouse

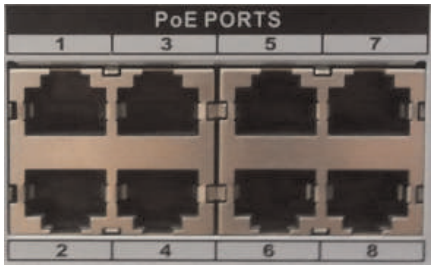
Ethernet cable



Quick start guides & Software CD

Hard drive size, number of channels, and camera configuration may vary by model. Please refer to your package for specific content details. Check your package to confirm that you have received the complete system, including all components shown above.

1. **Connect the Cameras**
   - Connect IP cameras to PoE (Power over Ethernet) Ports.
     OR
   - Connect IP cameras to the same LAN as the NVR. For details on connecting IP cameras over the LAN, see 14.3 *Device Search*, page 41.



2. **Connect a Monitor**
   - Connect an HDMI cable (not included) from the HDMI port on the rear panel to an HDTV or HDMI monitor.

   OR
   - Connect a VGA cable (not included) from the VGA port to the VGA port on your monitor.

   OR
   - Connect a BNC terminated cable (not included) from the Video OUT port to a TV or CCTV monitor.

3. **Connect the Mouse**
   - Connect the mouse (included) to the USB mouse port on the front or rear panel.

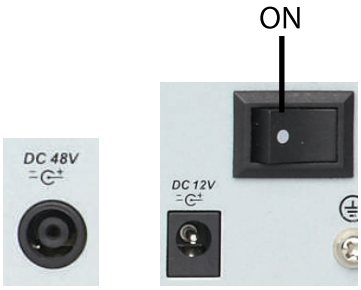
4. **Connect the Ethernet Cable**
   - Connect an Ethernet cable (not included) to the LAN port on the rear panel of system; connect the other end of the Ethernet cable to an empty LAN port on your router or switch (not included).

5. **Connect the Power Adapters**

   5.1. Connect the DC 12V power supply to the DC 12V port on the rear panel of the system. Connect the power cable to an outlet, power strip, or surge protector. This power adapter is used to power the main unit.

   5.2. Connect the DC 48V power supply to the DC 48V port on the rear panel of the system. Connect the power cable to an outlet, power strip, or surge protector. This power adapter is used to power the integrated PoE ports.

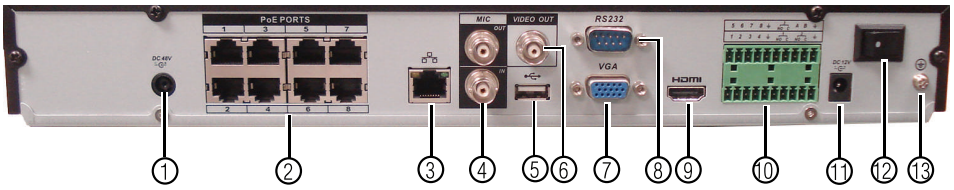
   5.3. Turn the power switch to the ON position.



5 DNR300 Series Front Panel

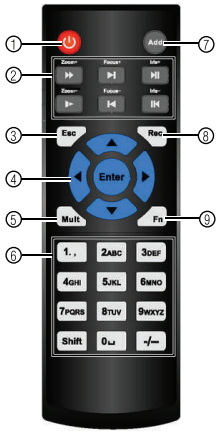
1. **USB Port**: Connect a USB mouse (included) or connect a USB flash drive (not included) for data backup or firmware upgrades.
2. **IR**: Not supported.
3. **Channel Indicators**: Glow when camera is connected to the corresponding channel.
4. **Playback Controls**:
   - **Pause/Play**: In live view, press to enter playback mode. Press to play/pause playback.
   - **Reverse**: Press to reverse playback/pause playback.
   - **Fast**: Press to increase playback speed.
   - **Next**: Press to skip to next video.
   - **Previous**: Press to skip to previous video.
   - **Slow**: Press for slow playback.
5. **Function Buttons**:
   - **REC**: Press to open manual recording controls.
   - **FN**: Performs special functions in some menus.
   - **SHIFT**: During text input, press to switch input types.
   - **ESC**: In menus, press to go back / exit menus. In playback, press to return to live view.
6. **Directional Buttons**:
   - **ENTER**: From live view, press once to open the System Information screen; press twice to open the Main Menu. In menus, press to confirm menu options.
   - **Directional Buttons**: Press to move cursor in menus. In live view, press up to change split screen layout; press left / right to select channels when single-channel mode is selected.
7. **Power Button**: Press and hold to power off the system. Press to power the system back on.
8. **IR Receiver and LED Indicators**: IR receiver for the remote control. Keep the IR receiver clear from obstructions.
   LED Indicators:
   - **POWER**: Glows to indicate the system is on.
   - **HDD**: Glows to indicate hard drive is in normal state. Turns off when there is a hard drive error.
   - **NET**: Glows when network is in normal state. Turns off for network error.

6 DNR300 Series Rear Panel



1. **DC 48V**: Port for 48V DC power supply (included) for integrated PoE ports.
2. **PoE Ports**: Camera input ports for IP cameras.
3. **LAN**: Connect an Ethernet cable to connect the system to a router or switch (not included).
4. **MIC**:
   - **IN**: BNC port for microphone (not included) for 2-way audio.
   - **OUT**: BNC port for audio output device (e.g. speakers; not included) for 2-way audio.
5. **USB port**: Connect a USB mouse or connect a USB flash drive (not included) for data backup or firmware upgrades.
6. **VIDEO OUT**: Video output (BNC) to connect the system to a secondary monitor.
7. **VGA**: VGA port to connect the system to a VGA monitor.
8. **RS232**: Service only; not in use.
9. **HDMI**: HDMI port to connect the system to a HDMI TV/monitor.
10. **ALARM IN / OUT / RS422-RS485:** Alarm block to connect external alarm or motion devices (not included).
    - **A/B**: Connection block for an RS485 PTZ camera (not included).
11. **DC 12V**: Port for 12V DC power supply (included).
12. **Power Switch**
13. **Ground**

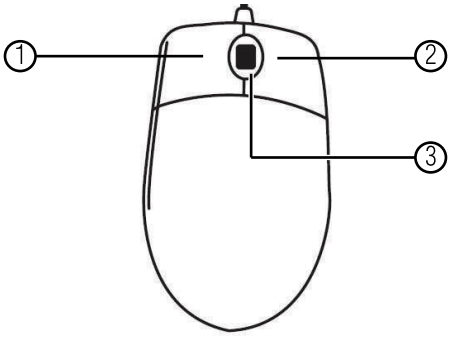
7 Remote Control



1. **Power**: Press and hold to power off the system. Press to power on.
2. **Playback Controls**:
   - **Pause/Play**: In live view, press to enter playback mode. Press to play/pause playback.
   - **Reverse**: Press to reverse playback/pause playback.
   - **Fast**: Press to increase playback speed.
   - **Next**: Press to skip to next video.
   - **Previous**: Press to skip to previous video.
   - **Slow**: Press for slow playback.
3. **Esc**: In menus, press to go back / exit menus. In playback, press to return to live view.
4. **Directional Keys**:
   - **Enter**: Press once to open the System Information screen; press twice to open the Main Menu. Press to confirm menu selections.
   - Press ◀ ▶ to move the menu cursor.
   - Press ▼ ▲ to change menu options.
5. **Mult**: Press to switch between full-screen and split-screen layouts.
6. **Number Keys**:
   - **1~0**: In live view, press to open channels in full-screen.
   - In menus, press to input numbers or text input.
   - **Shift**: Press to change input types.
7. **Add**: Configure remote control address.
8. **Rec**: Press to open manual record menu.
9. **Fn**: Press to perform special functions in some menus.

8 Mouse Control

The mouse is the primary control device for the system. To connect a USB mouse:



Connect a USB mouse to the USB port on the front or rear panel.

1. **Left-Button**:
   - In live view, click to open the Navigation Bar.
   - In live view, while in a split-screen display mode, double-click an individual channel to view it in full-screen. Double-click again to return to the split-screen display mode.
   - While navigating menus, click to open a menu option.
2. **Right-Button**:
   - During live view, right-click anywhere on the screen to open the Quick Menu.
   - Within navigating menus, right-click to exit menus.
3. **Scroll-Wheel**: Use to change menu options.

9 Using the System

Note
The default system user name is **admin** and password is **000000**.

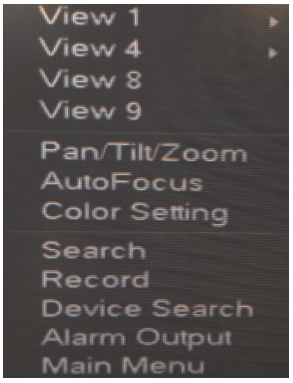
9.1 On-Screen Display

The system shows the following for all display views:

1. **Display Area**:
   - Double-click on a channel to view in full-screen; double-click again to return to split screen.
   - Right-click to open the Quick Menu.
   - Left-click to open the Navigation Bar.
   - Move the mouse to the top of a channel to view the Camera Toolbar.
   - Click-and-drag cameras to rearrange the channel display. This does not affect the channels each camera is connected or recording to.
2. **Channel Name**
3. **Channel Status Icons**:
   - : Channel is recording.
   - : Motion has been detected.
   - : Camera is locked (covert mode is activated).

9.2 Using the Quick Menu

The Quick menu gives you access to the system's key functions. To access the Quick Menu, right-click the screen during live view.



The Quick Menu has the following options:

- **View**: Select a camera in full-screen or select a multi-channel display.
- **Pan/Tilt/Zoom**: Access controls for PTZ cameras (not included).
- **AutoFocus**: If your camera has a mechanical focus lens, click to configure the zoom/focus levels or activate auto focus. See 9.7 *Adjusting Camera Zoom & Focus*, page 16.
- **Color Setting**: Configure color settings for IP cameras.
- **Search**: Search/playback recorded video. See 12 *Search (Playback)*, page 19.
- **Record**: Open the Record menu to select manual recording options. See 14.4.6 *Record*, page 47.
- **Device Search**: Open the Device Search menu to manage IP cameras.
- **Alarm Output**: Open the Alarm Output menu.
- **Main Menu**: Open the Main Menu. See 14 *Using the Main Menu*, page 26.

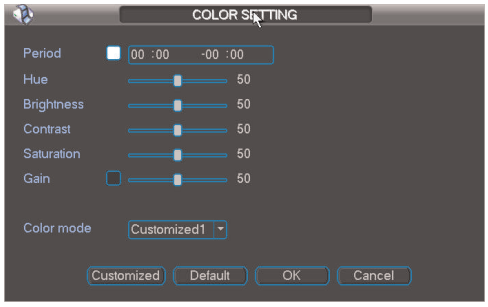
9.3 Adjusting Color Settings

Use the Color Settings menu to adjust color settings for your IP cameras.

To adjust color settings:

1. Right-click on the channel you would like to configure and select **Color Setting**. Enter the system password if prompted.
2. Adjust the **Hue**, **Brightness**, **Contrast**, and **Saturation** settings that the camera will use. To enable custom Gain controls, check **Gain** and use the slider to configure the gain level.
   OR

   Use **Color mode** to select a preset color profile.



Note

- Color settings will update once you save changes.
- To configure the **Customized1~4** profiles, click **Customized**.

3. Click **OK** to save changes.

9.4 Using the Navigation Bar

The Navigation Bar gives quick access to certain functions and menus.

To open the Navigation bar:

- Left click on the screen to open the Navigation Bar. The Navigation Bar has the following options:

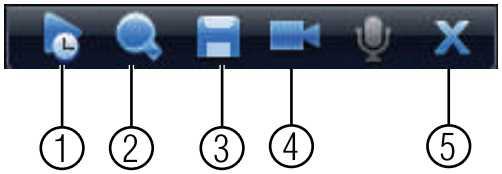
1. **Main Menu.**
2. **Collapse.**
3. **Select display layout.**
4. **PTZ.**
5. **Search.**
6. **Alarm Status.**
7. **Network.**
8. **HDD Manager.**
9. **View System Info.**

9.5 Using the Camera Toolbar

The Camera Toolbar is used to perform actions on a specific channel.

To access the Camera Toolbar:

- Move the mouse to the top of the channel display. The Camera Toolbar has the following options:



1. **Quick Playback.**
2. **Digital Zoom.**
3. **Real-time backup.**
4. **Device Search.**
5. **Close.**

9.5.1 Using Quick Playback

Quick Playback is used to playback the last 5~60 minutes of video from the selected channel. You can also access Quick Playback in split-screen mode, while still viewing live video from the other channels.

To use Quick Playback:

1. Move your mouse to the top of the channel display and click .

Note
By default, the NVR will begin playback from 5 minutes ago. You can increase this to up to 60 minutes using the **Realtime Play** setting in **Main Menu>Setting>General**.

2. Right-click to exit Quick Playback.

9.5.2 Using Digital Zoom in Live Display

1. Move your mouse to the top of the channel display and click to activate digital zoom. The icon will change to , indicating digital zoom is activated.

   Note
   You may activate digital zoom in multiple channels at the same time.

2. Click and drag inside the channel to zoom in.
   - Click and drag to pan the zoom area.
   - Right-click to zoom out and select a new zoom area.
   - Click to disable digital zoom. Note that the channel will remain at the same zoom level until you right-click inside it.

9.5.3 Using Real-time Backup

Real-time backup allows you to save footage from the live display to a USB flash drive (not included) or external hard drive (not included).

To use Real-time Backup:

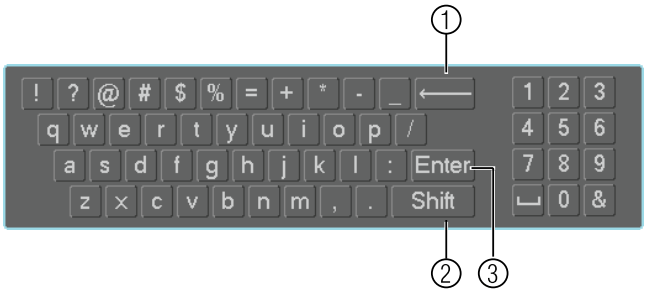
1. Insert the USB flash drive or external hard drive into one of the USB ports on the system.
2. Move your mouse to the top of the channel display and click to start Real-time Backup. The icon changes to .
3. Click again to end Real-time Backup. The file is saved to your USB device.

   Note

   If the system prompts you to log in, you will need to click again to start Real-time Backup after logging in.

9.6 Using the Virtual Keyboard

The Virtual Keyboard is used to input text or numeric values in certain menus.



1. **Backspace.**
2. **Enter capital letters.**
3. **Confirm entry.**

9.7 Adjusting Camera Zoom & Focus

If your camera has a motorized lens, you can control the zoom/focus level or activate auto focus from the NVR.

To adjust the camera's zoom focus:

1. Double-click on the channel where the motorized lens camera is connected.
2. Right-click and then click **AutoFocus**. Log into the system using the admin account (default user name is **admin** and password is **000000**).
3. Adjust the zoom and focus using the following options:
   - Use the sliders to adjust the **Zoom WIDE** or **Focus NEAR** settings for the camera.

Note
Hover the mouse over the sliders and use the mouse wheel to adjust by 1% at a time.

- Click the **AutoFocus** button to automatically focus the camera at the current zoom level.
- Click **Reset** to return the camera to the default zoom and focus levels.
- Click **Refresh** to refresh the settings shown on the NVR if someone has used the manual lens controls on the camera.

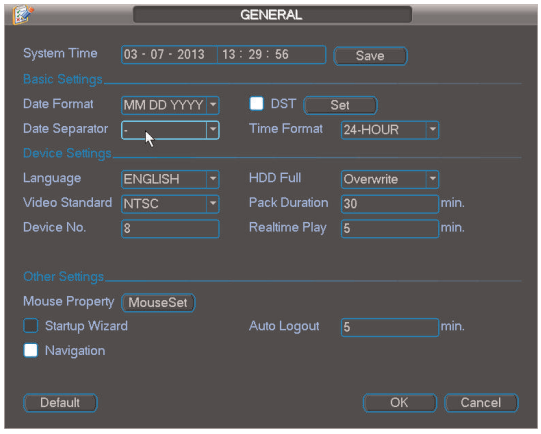
4. Right-click to exit and save changes.

10 Setting The Time

CAUTION
It is highly recommended to set the time on the system prior to doing any recording.

To set the date and time:

1. In the main viewing mode, right-click and click Main Menu. Log into the system using the admin account (default user name is **admin** and password is **000000**).
2. Click **Setting>General**.
3. Enter the current date (MM DD YYYY) and time (HH MM SS) under **System Time**.



4. Click **Save**.

Note
To configure Daylight Savings Time see 14.2.1 *General*, page 30 . To configure NTP, see 14.2.9 *Configuring NTP*, page 34.

11 Recording

By default, the system is set to immediately record at startup from connected cameras. This is called Continuous Recording. It is highly recommended to keep Continuous Recording on at all times.

The system supports the following recording types:

- **Continuous Recording**: By default, all camera channels are enabled with Continuous Recording. During Continuous Recording, the Record icon ( ) appears in the channel.
- **Motion Recording**: Cameras can be configured to record and mark events when motion is detected. When motion is detected, the Motion icon ( ) appears in the channel.

  Note
  You must enable motion recording in the Schedule before the system will record motion events. For details, see 14.2.3 *Schedule*, page 32.

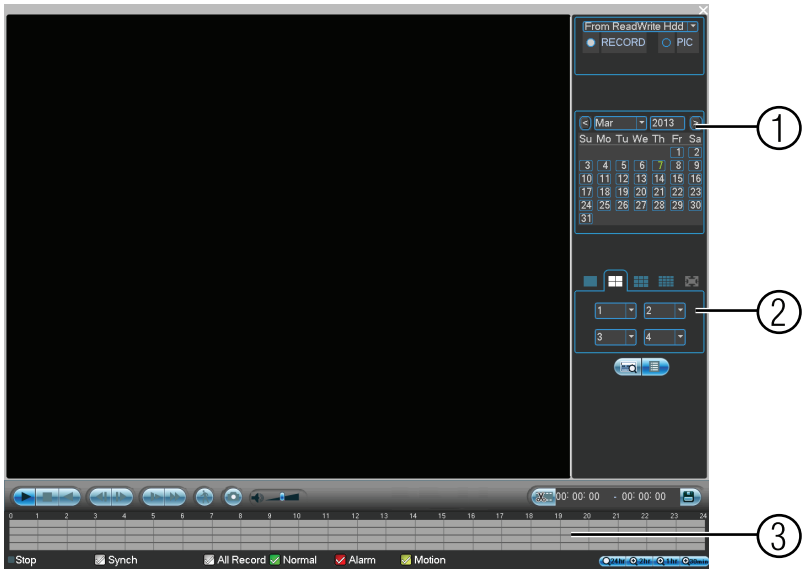
- **Alarm Recording**: Cameras can be configured to record when external alarm devices are triggered.

12 Search (Playback)

Search mode is used to navigate and playback recorded video files on the NVR.

12.1 Playing Back Video from the Hard Drive

1. From live view, right-click and then click **Search**. If needed, log in using the admin account (default user name is **admin** and default password is **000000**).
2. Configure the following:



2.1. Use the calendar on the right to select the day to playback.

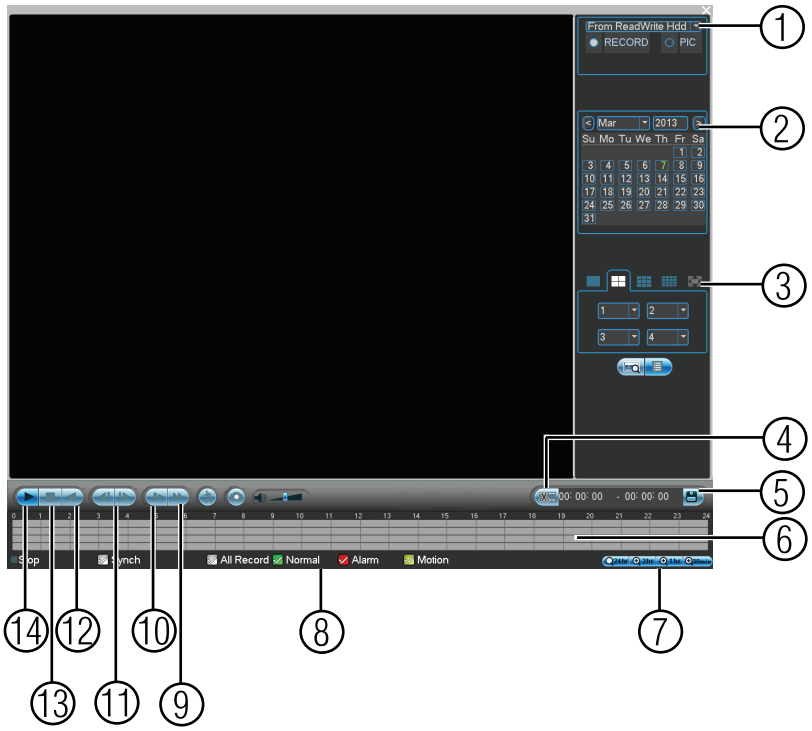
2.2. Use the drop-down menus to select the channels you would like to playback.

Note

Click the display options ( ) to playback multiple channels simultaneously.

2.3. Click inside the video bar to select the playback time. The system will begin playing back at the selected time.

12.2 Playback Controls



1. **Select playback device.**
2. **Calendar**: Select the day to playback.
3. **Channel select**: Select channels to playback.
4. **Video clip backup**: Select video clip start and end times.
5. **Backup video clip**: Click to save selected clip.
6. **Playback Bar**: Click inside the bar to select a playback time.
7. **Zoom Playback Bar**: Select scope of time bar.
8. **Recording types**: Click to show/hide recording types.
9. **Speed up.**
10. **Slow.**
11. **Previous/next frame.**
12. **Play backward.**
13. **Stop.**
14. **Play.**

13 Backup

Backup video files to external USB flash drive (not included) or self-powered USB external hard drive (not included).

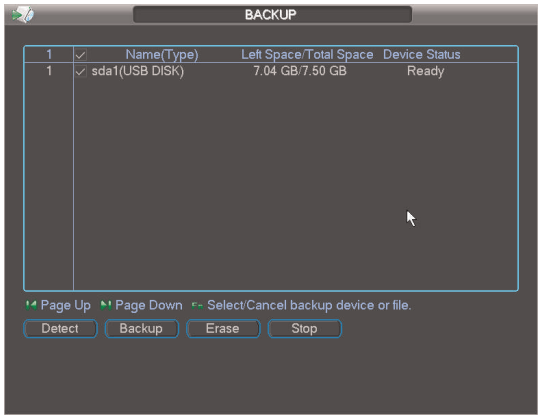
13.1 Formatting the USB Device

It is recommended to format your USB device before using it with the system.

⚠ **CAUTION**
Formatting the USB device will permanently erase all data.

To format a USB device:

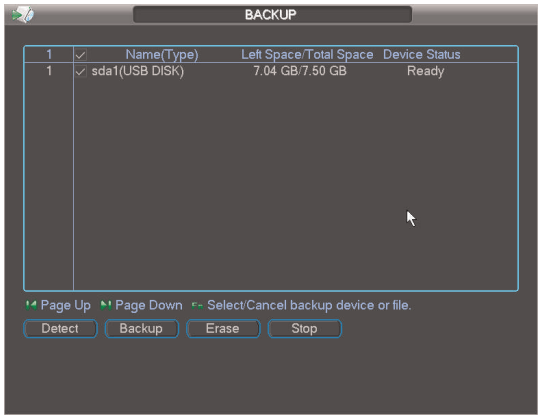
1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. From live view, right-click and then select **Main Menu**. Login if prompted.
3. Click **Backup**.
4. Check the USB device you would like to format and click **Erase**. Click **OK** to confirm.



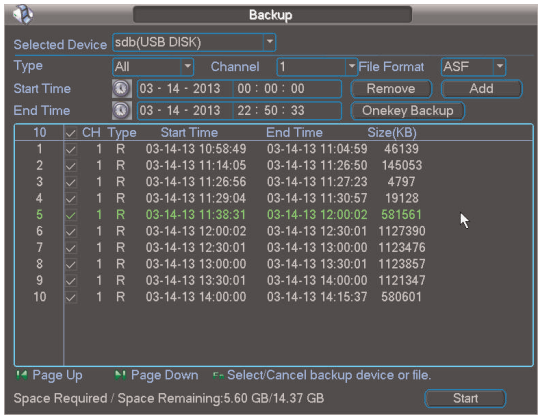
13.2 Backing up Video

1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. From live view, right-click and then select **Main Menu**. Login if prompted.
3. Click **Backup**.
4. Check the USB device where you would like to save video.

5. Click **Backup**.


BACKUP
1 Name(Type) Left Space/Total Space Device Status
1 sda1(USB DISK) 7.04 GB/7.50 GB Ready
Page Up Page Down Select/Cancel backup device or file.
Detect Backup Erase Stop

6. Configure your search options:



- **Type**: Select the recording type you would like to search for or select **All** to search all recording types.
- **Channel**: Select the channel you would like to search or select **All** to search all channels.
- **File Format**: Select **DAV** to save files to save files to .dav format. You can use the Player that is automatically saved on the USB device to playback .dav files on PC (Mac not supported). Or, select **ASF** for .asf format. You can playback .asf files in VLC Media Player (free download from www.videolan.org) on PC or Mac.

> **Note**
> VLC Media Player is a free software available from www.videolan.org. VLC Media Player is not supported by FLIR.

- **Start Time/End Time**: Select the start and end time for your search.

7. Click **Add**. A list of files that match your search criteria appears.
8. Check files you would like to backup and then click **Start**. Wait for the backup to complete.

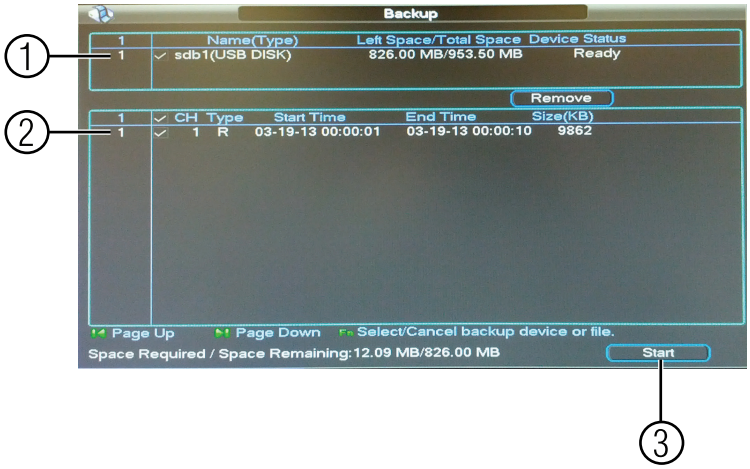
> **Note**
> HD video files saved on the system may take up a large amount of disk space. The size of video files selected and the amount of free space on your USB device is shown at the bottom of the screen.

13.3 Using Video Clip Backup

Video clip backup allows you to select a duration of video during playback mode and save it to a USB device (not included).

To use Video Clip Backup:

1. Insert a USB flash drive (not included) or USB external hard drive (not included) into one of the USB ports.
2. Start playing back video using the steps in 12.1 *Playing Back Video from the Hard Drive*, page 19.
3. Click to mark the beginning of the video clip. Click again to mark the end of the video clip.
4. Click to open the Backup menu.
5. Configure the following:



5.1. Check the USB device where you would like to save the file.
5.2. Check the files you would like to backup.
5.3. Click **Start**. Wait for the backup to complete before removing the USB flash drive.

13.4 Viewing Backup Files

To playback .dav backup video files, use the Player that is automatically installed on the USB device when you save a backup file.

Note
The Player is PC compatible only. For Mac users, make sure to save backup files in .asf format (select ASF under File Format). You can playback .asf backup video files in VLC Media Player (free download from www.videolan.org) on PC or Mac.

VLC Media Player is not supported by FLIR.

To view backup video files using the Player (PC only):

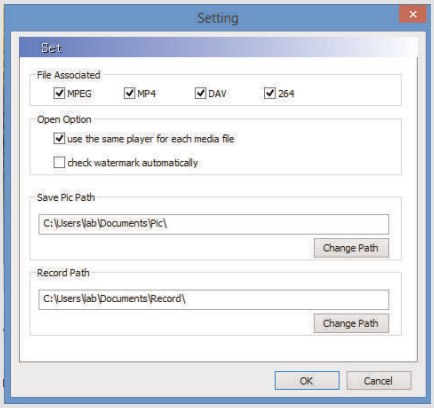
1. Insert the USB device into your computer. Open the USB device in Windows Explorer.
2. Right-click the **Player.exe** file and select **Open as administrator**. The Player opens and begins playing all video files on the USB device in sequence.
3. Use the Player controls to control playback or select other files for playback.

Video Player Controls

1. **Select playback time.**
2. **Open files.**
3. **Play/pause.**
4. **Stop/Stop recording.**
5. **Start recording.**
6. **Previous file.**
7. **Slow.**
8. **Back one frame.**
9. **Forward one frame.**
10. **Fast.**
11. **Next file.**
12. **Snapshot.**
13. **Shuffle/repeat.**
14. **Full-screen.**

Note

To view or change where manual recordings or snapshots are saved, right click in the video area and select **Parameter Setting**.

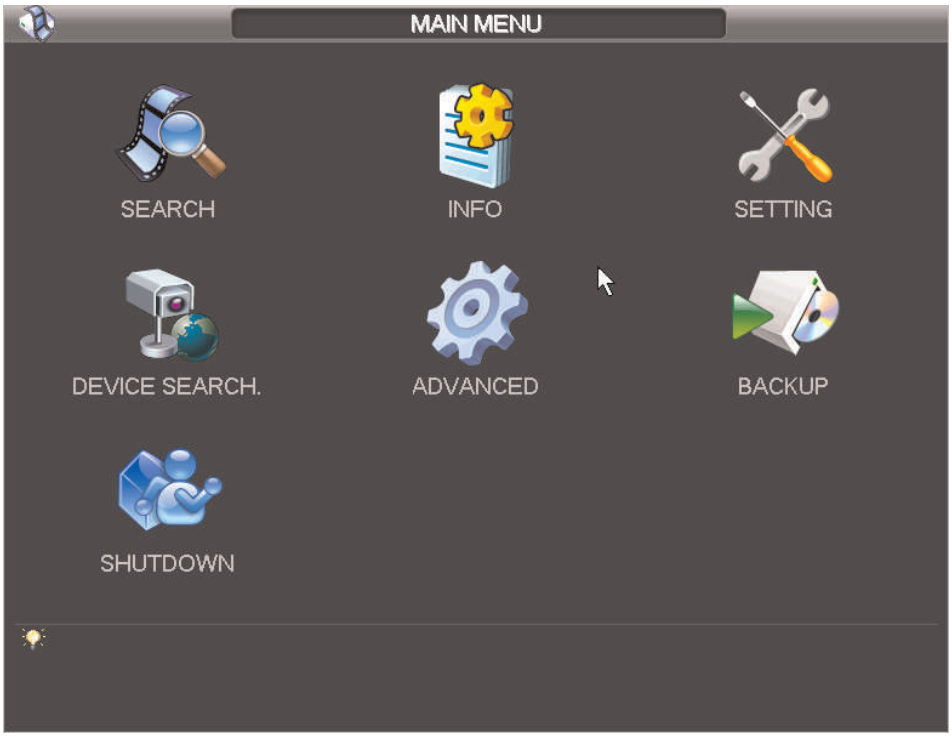


14 Using the Main Menu

To open the Main Menu:

- **Using the Remote Control**: Press the **Enter** button twice.
- **Using the Mouse**: Right-click and click **Main Menu**.

Note
The system password may be required to access the Main Menu. By default the user name is **admin** and the password is **000000**.



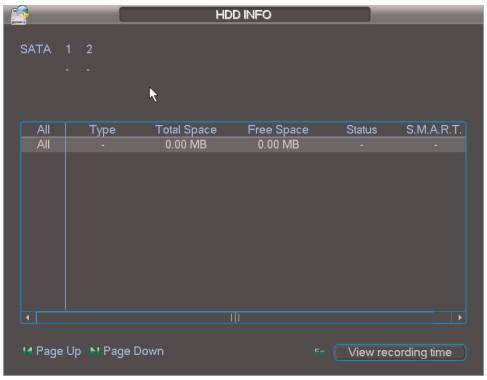
1. **SEARCH**: Open Search/Playback mode. For details, see 12 *Search (Playback)*, page 19.
2. **INFO**: View system information. Perform firmware upgrades.
3. **SETTING**: Configure general system, schedule, network, recording, display, and motion settings. Restore system to factory defaults.
4. **DEVICE SEARCH**: Connect IP cameras to the NVR.
5. **ADVANCED**: Configure HDD, user accounts, and error functions. Configure auto-restart. Save/restore system configuration. Access Manual Recording Menu.
6. **BACKUP**: Export files to USB device. For details, see 13 *Backup*, page 21.
7. **SHUTDOWN**: Logout, restart, or shutdown the system.

Note
Checkboxes on the system are filled in with a white color when settings are enabled or empty when disabled.

14.1 Info

The Info menu contains the following sub-menus showing system information.

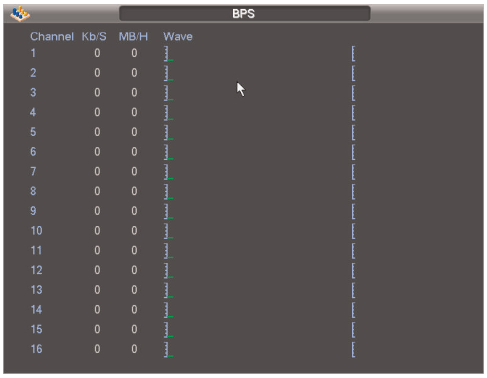
14.1.1 HDD Info



The HDD Info sub-menu shows information related to the hard drives installed in the system, including capacity, status, and type. Click **View recording time** to see the start and end times of recordings saved on the hard drives.

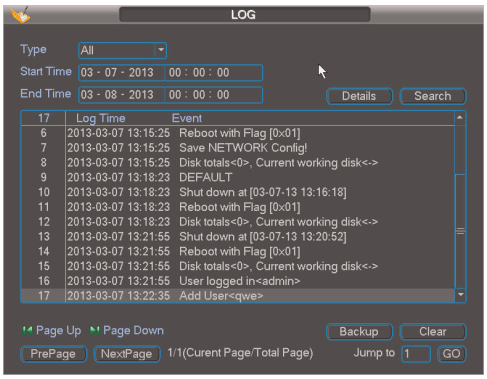
14.1.2 BPS

The BPS sub-menu shows the bitrates of connected IP cameras.



14.1.3 Log

The Log sub-menu allows you to search for system logs.


LOG
Type All
Start Time 03 - 07 - 2013 00 : 00 : 00
End Time 03 - 08 - 2013 00 : 00 : 00
Details
Search
17 Log Time Event
6 2013-03-07 13:15:25 Reboot with Flag [0x01]
7 2013-03-07 13:15:25 Save NETWORK Config!
8 2013-03-07 13:15:25 Disk totals<0>, Current working disk<->
9 2013-03-07 13:18:23 DEFAULT
10 2013-03-07 13:18:23 Shut down at [03-07-13 13:16:18]
11 2013-03-07 13:18:23 Reboot with Flag [0x01]
12 2013-03-07 13:18:23 Disk totals<0>, Current working disk<->
13 2013-03-07 13:21:55 Shut down at [03-07-13 13:20:52]
14 2013-03-07 13:21:55 Reboot with Flag [0x01]
15 2013-03-07 13:21:55 Disk totals<0>, Current working disk<->
16 2013-03-07 13:21:55 User logged in<admin>
17 2013-03-07 13:22:35 Add User<qwe>
Page Up
Page Down
Backup
Clear
PrePage
NextPage
1/1(Curent Page/Total Page)
Jump to 1
GO

To search for system logs:

1. Under **Type**, select the log type to search for.
2. Under **Start Time** and **End Time**, select the start and end time for your search.
3. Click **Search**.
4. (Optional) Click **Backup** to export logs to a USB flash drive connected to the system.

14.1.4 Version (Updating Firmware)

VERSION
Channels 16
Alarm In 16
Alarm Out 3
System 2.610.GM00.0
Build Date 03-06-2013
Web 2.1.7.72
Serial No. PA2FF00300856
UPGRADE
If you need to upgrade system now,please insert USB upgrade disk,then press the start button to start upgrade.Don't shut down the power during upgrade!
Start

The Version sub-menu allows you to view information about the current firmware. You may also update the firmware through the version menu.

To update the system firmware:

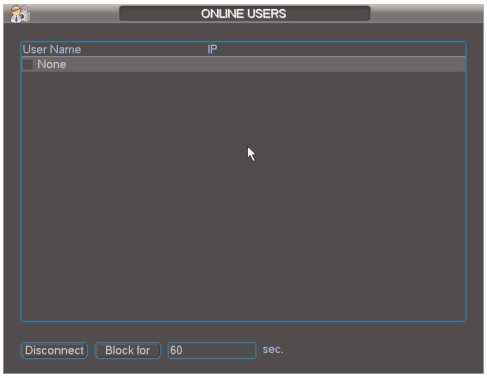
1. Download the latest firmware update from www.flirsecurity.com/pro.
2. Copy the firmware to a blank USB flash drive.

> **Note**
> Do not have any folders on the USB flash drive—just the firmware file.

3. Connect the USB flash drive to a USB port on the system.
4. Right-click and then select **Main Menu>Info>Version**.
5. Click **Start** to update firmware. Wait for the firmware upgrade to complete.

> **WARNING**
>
> Do not remove the USB flash drive until the upgrade process is complete or power off the NVR during the upgrade process.

14.1.5 Online Users

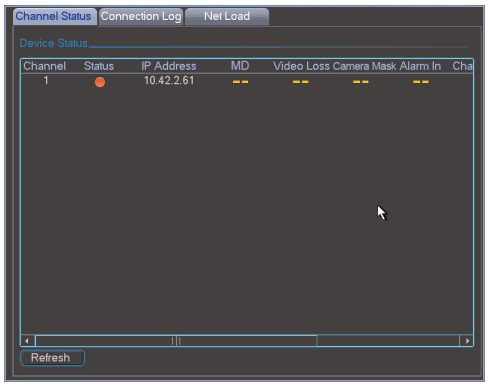


The Online Users sub-menu shows a list of users connected to the system using remote devices. You may click **Disconnect** to disconnect a user for up to 18 hours or click **Block** to block a user from the system.

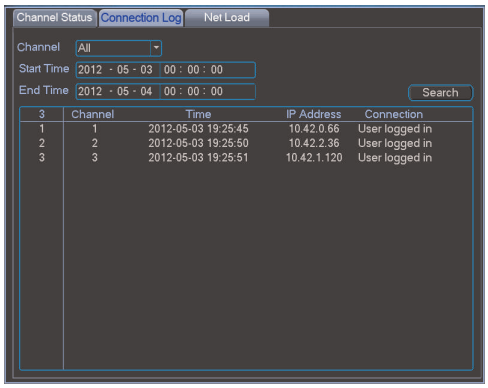
14.1.6 Remote Device Info

The Remote Device Info sub-menu shows information about IP cameras connected to the system, it contains the following tabs:

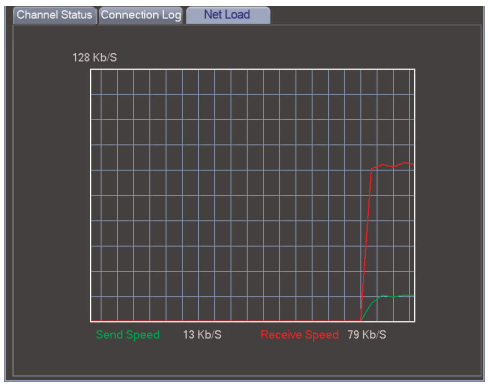
- **Channel Status**: Shows the IP address, model number, and camera status.



- **Connection Log**: Search for camera status logs, including user access to cameras.



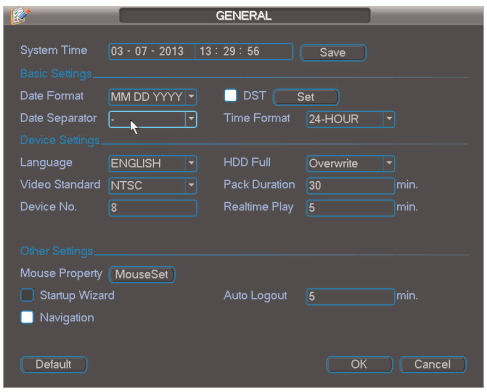
- **Net Load**: Shows a graph of upload and download traffic for your system.



14.2 Setting

The Setting menu allows you to configure general system, schedule, network, recording, display, and motion settings. It also allows you to restore the system to factory defaults.

14.2.1 General



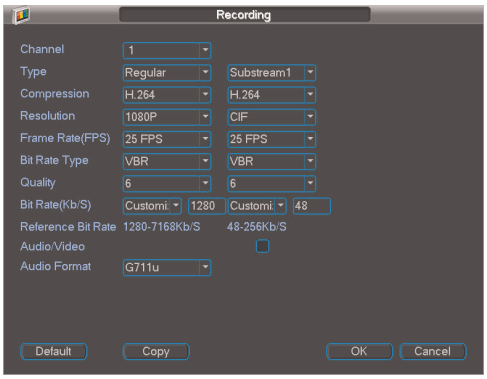
The General sub-menu allows you to configure the time and general system settings.

The General sub-menu contains the following options:

- **System Time**: Select the current date and time and click Save to save changes.
- **Date Format**: Select the date format (**YYYY MM DD**, **MM DD YYYY**, or **DD MM YYYY**).
- **Date Separator**: Select if you would like a dot (.), dash (-), or slash (/) to separate the date display.
- **DST**: Check to enable daylight savings time adjustments. To configure the start and end times for daylight savings, click **Set**. Then, configure the **Start** and **End** as needed, and click **OK**.
- **Time Format**: Select **24-HOUR** or **12-HOUR**.
- **Language**: Select the system language.
- **Video Standard**: Select **NTSC** (North America) or **PAL** (Europe).
- **Device No.**: Select the remote control ID for the system.
- **Device ID**: Enter a custom name for the system.
- **HDD Full**: Select **Overwrite** for the system to begin overwriting the oldest recordings when the hard drive is full or select **Stop Recording** for the system to stop recording when the hard drive is full.
- **Pack Duration**: Enter the desired pack duration. The pack duration determines the duration of video files saved to the system.
- **Realtime Play**: Select the duration of videos that will be played back in Quick Playback mode. For example, if Realtime Play is set to 5 minutes, Quick Playback will start playing back video recorded from 5 minutes ago on the selected channel.
- **Mouse Property**: Click **MouseSet**, adjust the double-click speed and click **OK**.
- **Startup Wizard**: Check to enable the Startup Wizard when your system starts. It is recommended to disable Startup Wizard once you have configured the system.
- **Navigation**: Check to enable the System Toolbar that appears when left clicking on the screen.
- **Auto Logout**: Enter the amount of time the system will wait before logging a user out when idle.
- **IPC Time Sync**: The system will regularly sync the internal clocks of connected IP cameras. Enter the interval between time syncs.

Note
Click **OK** when finished making changes.

14.2.2 Recording

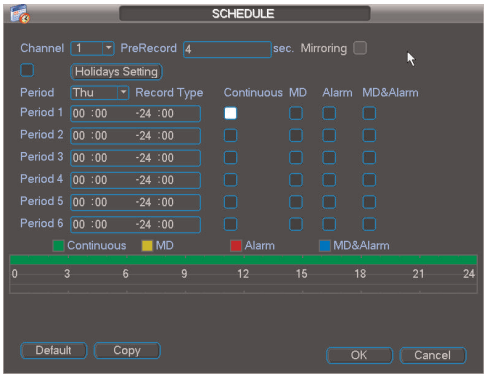


The Recording sub-menu allows you to configure image quality settings for the recording stream and sub-stream (used during remote connection). Settings for the recording stream are shown on the left, and sub-stream settings are shown on the right.

To configure recording quality settings:

1. Under **Channel**, select the channel you would like to configure.
2. Under **Resolution**, select the resolution for the selected recording type. Settings available depend on the model of IP camera connected.
3. Under **Frame Rate**, select the frame rate for the selected recording type on the left. Select the frame rate for the sub-stream on the right.
4. Under **Bit Rate Type**, select **CBR** (Constant Bit Rate) or **VBR** (Variable Bit Rate) for the selected recording type on the left and sub-stream on the right. If you select VBR, select the Quality from **1** (lowest) to **6** (highest).
5. Under **Bit Rate (Kb/S)**, select the bit rate for the selected recording type on the left and the sub-stream on the right.
6. Under **Audio/Video**, check the box on the left to enable audio recording (camera must have microphone attached). Check the box in the middle to enable audio streaming to remote users. Check the box on the far right to enable video streaming to remote users (un-check to hide the channel from remote users.
7. (Optional) To copy settings to other channels, click **Copy**, select channels to apply settings to, and click **OK**.
8. Click **OK** to save changes.

14.2.3 Schedule


SCHEDULE
Channel 1 PreRecord 4 sec. Mirroring
Holidays Setting
Period Thu Record Type Continuous MD Alarm MD&Alarm
Period 1 00 :00 -24 :00
Period 2 00 :00 -24 :00
Period 3 00 :00 -24 :00
Period 4 00 :00 -24 :00
Period 5 00 :00 -24 :00
Period 6 00 :00 -24 :00
Continuous MD Alarm MD&Alarm
0 3 6 9 12 15 18 21 24
Default Copy OK Cancel

The Schedule sub-menu allows you to configure the recording schedule for continuous and motion recording. It also allows you to configure holiday, pre-recording, and mirroring settings.

Note
To use motion recording, motion detection must be enabled for the channel. For details, see 14.2.14 *Motion*, page 38.

1. Under **Channel**, select the channel you would like to configure or select **All**.
2. Under **Period**, select the day of the week you would like to configure, or select **Holiday** or **All**.
3. Configure up to 6 separate schedule periods.
   - Configure the start and end time for the time period on the left.
   - Check the types of recording that will apply to the time period on the right: **Continuous**, **MD** (Motion Detection), **Alarm**, or **MD&Alarm**.
   - A visual representation of the current schedule is shown below.
4. (Optional) Click **Copy** to copy the selected schedule to other channels. Select the channels you would like to copy to and click **OK**.
5. Click **OK** to save changes.

14.2.4 Configuring Pre-Recording and Mirror Recording

Pre-recording determines the amount of time the system will record before events. Mirroring allows the camera to record simultaneously to a secondary mirror hard drive and primary recording hard drive.

Note
Secondary hard drive must be installed and configured to use mirror recording function.

To configure pre-recording and mirror recording:

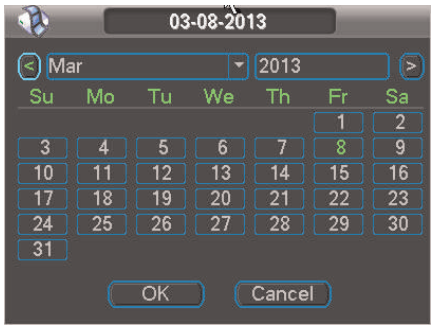
1. Under **Channel**, select the camera you would like to configure or select **All**.
2. Under **PreRecord**, select the duration for pre-recording.
3. Check **Mirroring** to enable mirror recording for the selected channel.
4. Click **OK** to save settings.

14.2.5 Configuring Holidays

Holiday settings allow you to configure a special recording schedule on certain days.

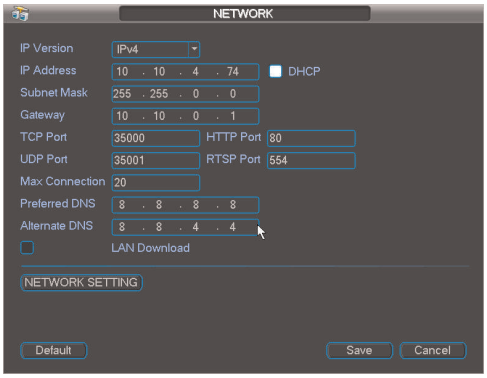
To configure holidays:

1. Check the checkbox next to Holidays Setting to enable holidays.
2. Click **Holidays Setting**.



3. Click days in the calendar to enable them as holidays. Selected holidays are highlighted in blue.
4. Click **OK**. Click **OK** to save changes.

14.2.6 Network



The Network sub-menu allows you to configure network settings.

14.2.7 Configuring DHCP or Fixed IP Address

1. From live view, right-click and select **Main Menu**. Login if prompted.
2. Click **Setting>Network**.
3. Check **DHCP** to use DHCP or un-check to use a static IP address. If you un-check DHCP, configure the following:
   - **IP Address.**
   - **Subnet Mask.**
   - **Gateway.**
   - **Preferred DNS.**
   - **Alternate DNS.**
4. Click **Save** to save your changes. Restart the system to update the IP address.

14.2.8 Configuring System Ports

The system uses the following ports:

- **TCP Port (Client Port)**: Used for remote video streaming to computers and mobile devices. The default port number is **35000**.
- **HTTP Port**: Used to enable connection to the system's web browser interface. The default port number is **80**.
- **UDP Port**: Used for special applications. The default port number is **35001**.
- **RTSP Port**: Used for special applications. The default port number is **554**.

Note
You must port forward the TCP (Client) Port and HTTP Ports to enable remote access to the system.

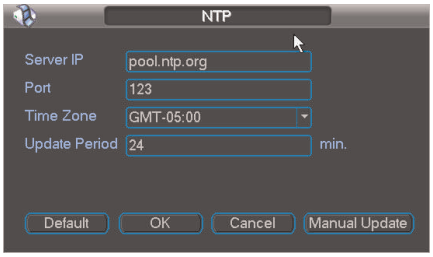
To configure ports:

1. Configure the **TCP Port (Client)**, **HTTP Port**, **UDP Port**, and **RTSP Port** fields as needed.

   Note
   Please note that if the HTTP is port is anything other than 80, you must enter http:// before the camera's IP address and colon (:) and the HTTP port after the IP address when connecting using an Internet browser (e.g. if the HTTP port is *85*, enter *http://192.168.x.x:85*).

2. Click **Save**. The system will restart to update the ports used.

14.2.9 Configuring NTP

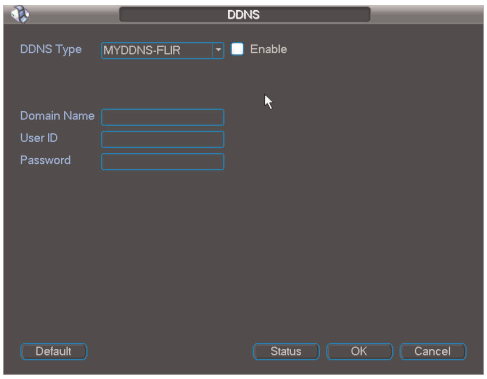


You can sync the system clock with an Internet NTP time server.

To sync the system with a time server:

1. Click **Network Setting**.
2. Check **NTP**.
3. Double-click **NTP** to open the configuration menu.
4. Configure the following:
   - Under **Server IP**, enter the IP or DNS address of the NTP server.
   - Under **Port**, enter the NTP server port number.
   - Under **Time Zone**, select your time zone.
   - Under **Update Period**, enter the interval your system will sync the time with the selected server.
5. Click **Manual Update** to test the server settings entered and manually sync the system time.
6. Click **OK**. Click Save to save your changes.

14.2.10 Configuring DDNS



The DDNS Setup window allows you to enter your FLIR DDNS settings in the NVR. This step is required for remote access.

Prerequisites:

- Create a DDNS account. For details, “Appendix D: Setting Up DDNS Service” on page 98.
- Port forward ports on your router to NVR’s IP address (by default, ports **35000** and **80**).
- Have your DDNS account name, password, and domain name ready.

To configure DDNS settings:

1. Click **Network Setting**.
2. Check **DDNS**.
3. Double-click **DDNS**.
4. Ensure **Enable** is checked. The box will be white when DDNS is enabled.
5. Under **Domain Name**, enter the **Domain Name** from the confirmation email you received after registering for DDNS.
6. Under **User ID**, enter the **User Name** from the confirmation email.
7. Under **Password**, enter the **Password** from the confirmation email.
8. Click **OK**.
9. Click **OK**.
10. Click **Save**.

14.2.11 Connecting to your system

After you have port forwarded the required port, created a DDNS account, and enabled DDNS on your system, you must enter the DDNS URL into Internet Explorer to access your NVR.

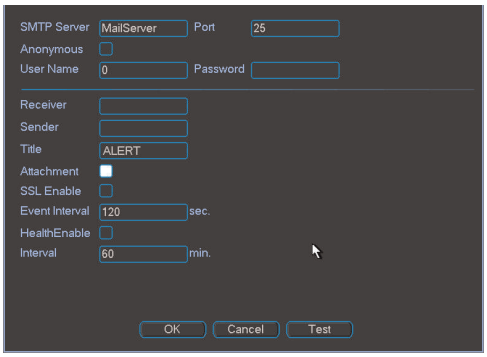
The DDNS URL must include **http://** , the name of your DDNS URL, followed by a **colon**, then the **HTTP port** of your NVR.

For example:

http://tomsmith.myddns-flir.com:80

Note
If you change your HTTP port number (port 80) to a different port, you must enter your port number after the DDNS address

14.2.12 Configuring Email Alerts

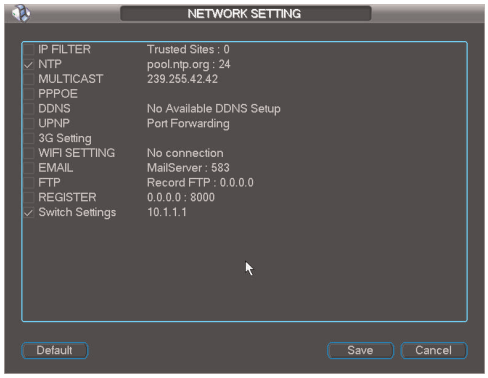


You can configure the system to send out email alerts for motion detection or other events.

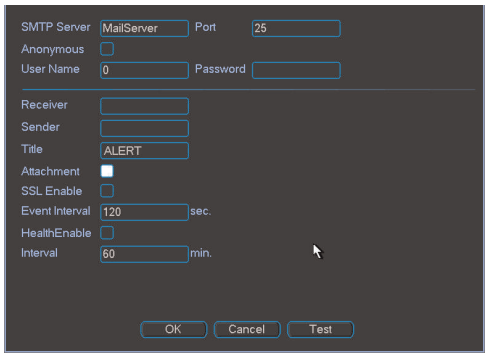
Note
To send out motion detection alerts, you must enable the Send Email option for motion detection on each camera. For details, see 14.2.15 *Configuring Motion Detection Events*, page 38.

To configure Email Alerts:

1. From live view, right-click and select **Main Menu**. Log in if prompted.
2. Click **Setting>Network**.
3. Click **Network Setting**.
4. Check **Email**. Double-click **Email**.



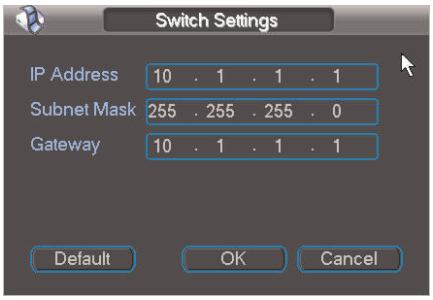
5. Configure the following:



- **SMTP Server**: Enter the SMTP server address.
- **Port**: Enter the port used by the SMTP server.
- **Anonymous**: Check if your server supports anonymous log ins. Otherwise, leave this unchecked.
- **User Name**: Enter the SMTP user name.
- **Password**: Enter the SMTP password.
- **Receiver**: Enter the email address that will receive alerts.
- **Sender**: Enter the sender's email address.
- **Attachment**: Check to include a jpg image attachment of the camera.
- **Title**: Enter the subject line for email alerts.
- **Encrypt Type**: Select **SSL** or **TLS** if your server uses encryption. Select **None** if your server does not use encryption.
- **Event Interval**: Enter the interval between alert emails.
- **Health Enable**: Check to enable health check emails. Health check emails will be sent periodically to ensure that the system is functioning normally.
- **Interval**: Enter the interval in minutes for health check emails.

6. Click **Test** to send a test email.
7. Click **OK**.
8. Click **Save** to save settings.

14.2.13 Configuring Switch Settings



You can configure the networking settings for the internal PoE switch.

CAUTION

Changing this information from the default values may disrupt the connection to the cameras. Make sure your IP cameras are using DHCP or IP addresses that are compatible with your selected settings.

To configure switch settings:

1. Click **Network Setting**.
2. Double-click **Switch Settings**.
3. Configure the **IP Address**, **Subnet Mask**, and **Gateway** for the internal PoE switch.
4. Click **OK**. Click **Save** to save changes. The system will restart.

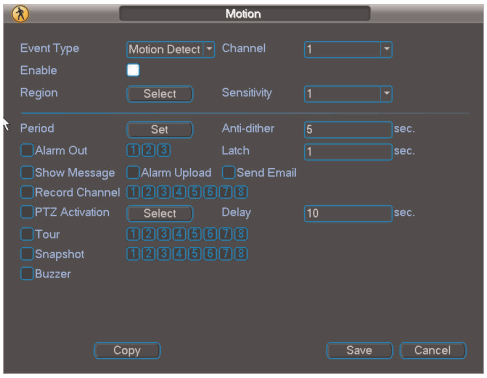
14.2.14 Motion

The Motion sub-menu allows you to configure settings for motion detection.

14.2.15 Configuring Motion Detection Events

Motion Detection events allow the system to mark footage that has motion. This allows you to quickly locate relevant footage through Search. You can also configure system responses to motion detection events, such as activating the system buzzer or sending an email alert.

To configure Motion Detection events:

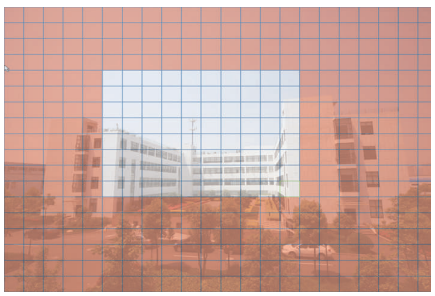


CAUTION

Using the Copy button in the Motion menu will copy all settings, including the Record Channel setting. This means that motion detection may not trigger the correct channel to record.

1. Under **Event Type**, select **Motion Detect**.
2. Under **Channel**, select the channel you would like to configure.
3. Check **Enable** to enable motion detection on the selected channel.
4. Click **Select** next to Region to configure which areas of the image will be enabled for motion detection. A grid will appear over the camera's live view.

Motion Grid



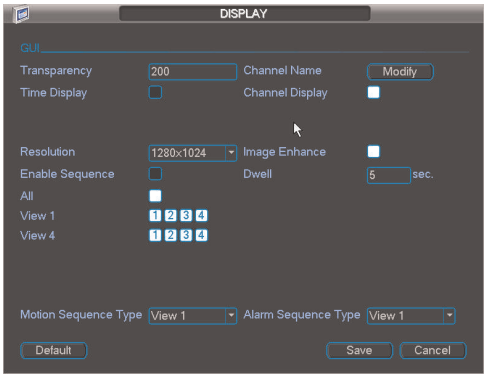
Areas enabled for motion detection are shown in red and areas that are disabled are transparent. Click and drag to enable or disable areas for motion detection. Right-click when finished.

5. Under **Sensitivity**, select the motion detection sensitivity between **1** (lowest) and **6** (highest).
6. Under **Anti-dither**, enter the anti-dither time. After a motion event occurs and motion stops, if motion is detected within the anti-dither time, the system continues the motion event and includes the new motion within the first event, rather than creating a new motion event.
7. Under **Delay**, enter the post-recording time.
8. To configure a schedule when motion detection will be enabled on this channel, click **Set** next to Period. Configure times when motion detection will be enabled. For example, you may want to disable motion detection during business hours and enable it outside of business hours. Click **OK** when finished.

   Note
   This setting can override scheduled motion recording. This means that motion recording will only take place at times that are enabled both in the Schedule menu and here.

9. Configure the following system actions when motion is detected:
   - **Show Message**: Check to enable an on-screen pop-up. On-screen pop-up shows the channels an event occurred on and the type of event.
   - **Send Email**: Check to enable email alerts. You must configure email alerts before you will be able to receive them (see 14.2.12 *Configuring Email Alerts*, page 36).
   - **Record Channel**: Select the channels that will record when motion is detected on the selected channel.
   - **Buzzer**: Check to enable the system buzzer.
   - **Snapshot**: Check to attach a .jpg image of the camera when sending email alerts.
10. Click **Save** to save changes.

14.2.16 Display



The Display sub-menu allows you to configure the system's display settings, such as the monitor resolution.

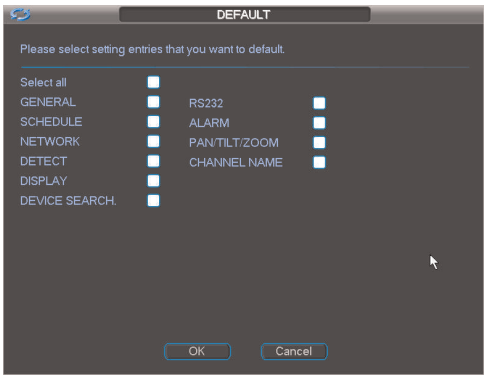
To configure display settings:

1. Configure the following, as needed:
   - **Transparency**: Select the menu transparency between **128** (lowest) and **255** (highest).
   - **Channel Name**: Click **Modify** and enter names for your IP cameras. Click **Save** when finished.
   - **Time Display**: Check to enable system time display.
   - **Channel Display**: Check to enable camera title display.
   - **Resolution**: Select the correct resolution for your monitor. The system will reboot when you save changes.
   - **Image Enhance**: Check for the system to digitally improve the video quality on the live display. This setting does not affect recordings.
   - **Enable Sequence**: Check to enable Sequence mode. When Sequence mode is activated, the system will cycle through enabled views and a (arrows) icon is shown on screen. You can click this icon to pause Sequence mode.
   - **View 1/View 4/View 8**: Check to enable views to be shown in Sequence mode. View 1 allows you to enable/disable specific channels in Sequence mode. Other View options allow you to enable/disable views based on pages. On 8-channel models for example, View 4 #1 represents channels 1~4 and #2 represents channels 4~8.

     Note
     Available options depend on the number of channels your system has.

   - **Dwell**: Enter the Dwell time in seconds. The Dwell time is the amount of time views are shown on screen before changing in Sequence mode.
   - **Motion Sequence Type**: Select the view type that will be viewed when motion is detected.
2. Click **Save** to save changes.

14.2.17 Default



The Default sub-menu allows you to reset the system to factory default settings.

Note
Resetting to factory defaults does not reset user accounts or passwords.

To reset the system to factory default settings:

1. Check the menus you would like to reset to default settings.
2. Click **OK**.

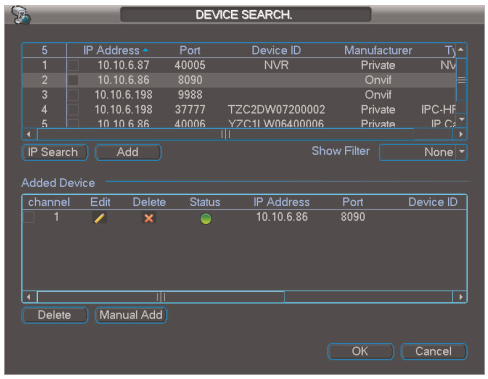
14.3 Device Search

The Device Search menu allows you to manage connections to your IP cameras. SyncroIP cameras connected to the PoE (Power over Ethernet) Ports will automatically be detected by your NVR. Device Search also allows you to search for IP cameras connected to the LAN. Some configuration may be required to connect IP cameras from other manufacturers.

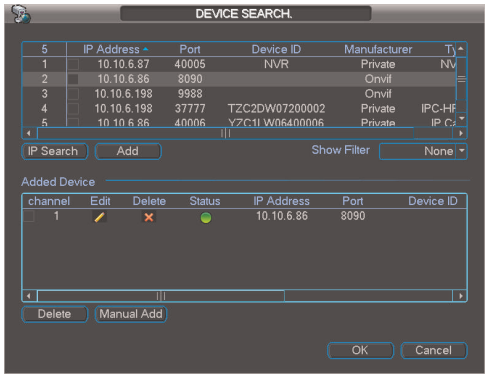
Note
For a list of 3rd party IP cameras supported, visit www.flirsecurity.com/pro.

14.3.1 Adding Cameras from the LAN

1. Connect the camera to a router or switch on the same network as the NVR.
2. Right-click and select **Device Search**. Log in using the admin account (the default user name is **admin** and the default password is **000000**).
3. Click **IP Search**. The NVR scans your LAN for compatible IP cameras.

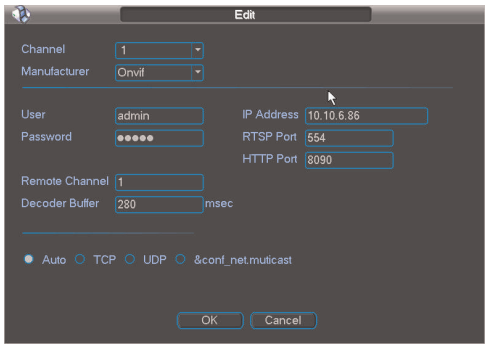


4. Check the camera(s) you would like to add and click **Add**.



5. If the Status indicator is green, the camera is connected and no further configuration is required. Click **OK** to save changes.

6. If the Status indicator is red, click . Update the following information, as needed.

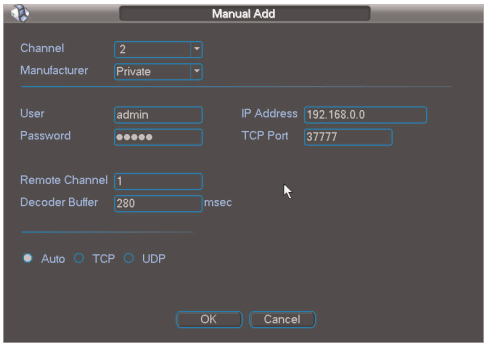


- **Manufacturer**: Select the manufacturer of your IP camera.
- **User**: Enter the camera's user name.
- **Password**: Enter the camera's password.
- **RTSP Port**: Enter the camera's RTSP Port.
- **HTTP Port**: Enter the camera's HTTP Port.

> **Note**
> See the manufacturer's user manual for your IP camera for the default user name, password, etc.

7. Click **OK**. Click **OK** again to save changes.

14.3.2 Manual Add



If the IP address of your IP camera does not appear when you run IP search, ensure that the camera is connected to the same LAN as the NVR or is connected to the PoE Ports. You may attempt to manually connect IP cameras using Manual Add.

To manually add a camera to the NVR:

1. Click **Manual Add**. Configure the following:
   - **IP Address**: Enter the IP address of your IP camera.
   - **Manufacturer**: Select the manufacturer of your IP camera.
   - **User**: Enter the camera's user name.
   - **Password**: Enter the camera's password.
   - **RTSP Port**: Enter the camera's RTSP Port.
   - **HTTP Port**: Enter the camera's HTTP Port.

   Note
   See the manufacturer's user manual for your IP camera for the default user name, password, etc.

2. Click **OK**. Click **OK** again to save changes.

14.3.3 Editing Cameras

If the Status indicator on cameras connected to the NVR via PoE or LAN is red or if you change the connection details for your IP cameras, you will need to update this information.

To edit cameras:

1. Click next to the camera you would like to edit.
2. Configure the connection information as needed.
3. Click **OK**. Click **OK** again to save changes.

14.3.4 Deleting Cameras

- Click next to the camera you would like to delete.

14.4 Advanced

Configure HDD, user accounts, and error functions. Configure auto-restart. Save/restore system configuration. Access Recording Menu.

14.4.1 HDD Management

HDD Management allows you to format hard drives and manage hard drive settings. The top right corner shows hard drive status.

- **O**: Normal hard drive operation.
- **X**: Hard drive error.
- **-**: Hard drive is not installed.

14.4.2 Formatting Hard Drives

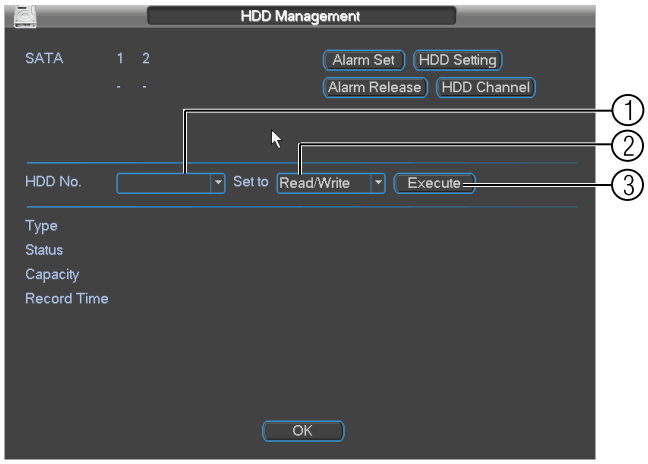
You must format hard drives before you may use them with the system.

⚠ **CAUTION**
Formatting the HDD erases all data on the hard disk. This step cannot be undone. System settings will not be erased.

To format a hard drive:

1. From Live View, right-click and select **Main Menu>Advanced>HDD Management**.

2. Configure the following:



2.1. Under **HDD No.**, select the hard drive you would like to format. Information about the hard drive appears in the lower section of the menu.
2.2. Under **Set to**, select **Format**.
2.3. Click **Apply**. Click **OK** to confirm. Wait for the hard drive to format. Hard drives become Read/Write hard drives by default when formatted.

14.4.3 Selecting Hard Drive Types

The system supports the following hard drive types:

- **Read/Write**: Normal recording hard drive.
- **Read only**: Do not record on the hard drive.
- **Mirroring**: Record in parallel to Read/Write hard drive for cameras enabled for mirroring. This allows you to create automatic backups of recordings.

Note
Mirroring must be enabled in the schedule (for details, see 14.2.3 *Schedule*, page 32).
Mirroring begins backing up data starting when the hard drive is configured for mirroring.

To select hard drive types:

1. Under **HDD No.**, select the hard drive you would like to format.
2. Under **Set to**, select the hard drive type.
3. Click **Apply**.
4. Right-click to exit the HDD Management menu. The system will restart.

14.4.4 Configuring Hard Drive Group Settings

Hard drive group settings allows you to balance recordings for your IP cameras across multiple hard drives.

To configure hard drive group settings:

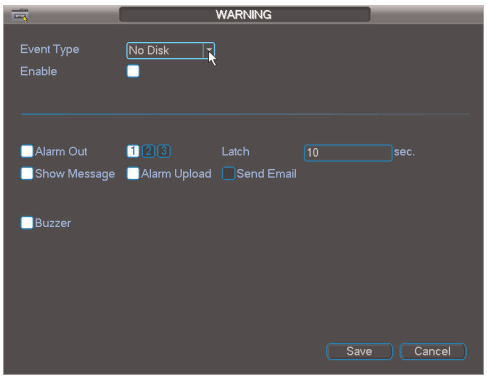
1. Click **HDD Setting**.

2. Under **HDD Group** select the group number you would like to assign to each hard drive.

3. Click **OK**. The system will restart.
4. Return to the HDD Manage menu (right-click>**Main Menu>Advanced>HDD Manage**). Click **HDD Channel**.
5. For each channel, select the hard drive group you would like it to record to.

6. Click **OK**.

14.4.5 Warning



The Warning sub-menu allows you to configure actions taken when system errors occur.

To configure system error actions:

1. Under **Event Type**, select one of the following system errors to configure: **No Disk**, **Disk Error**, **Disk No Space**, **Net Disconnection**, **IP Conflicted**, or **MAC Conflicted**.
2. Check **Enable** to enable warnings for the selected Event Type.
3. Configure the following actions that will be taken when errors occur:
   - **Show Message**: Check to show pop-up window with information related to the error.
   - **Send Email**: Check to enable email message. You must configure email alerts before you will be able to receive them.
   - **Buzzer**: Check to enable system buzzer.
4. Click **Save** to save changes.

14.4.6 Record

The Record menu is used control manual recording for connected cameras.

The Record menu is divided into the following sections:

- The **Record Mode** section defines settings for the main (high quality) recording stream.
- The **Substream** section defines settings for an optional lower quality recording stream. This is useful because you can record the substream to the hard drive and stream it for playback to remote devices. This saves bandwidth during remote playback.

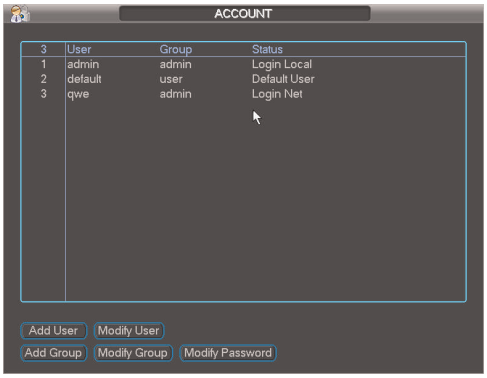
> **Note**
> Enabling Substream Recording is required to use playback mode on a smartphone or tablet. Substream Recording will increase the amount of disk space required for recording.

To configure manual recording:

1. Right-click in live view and select **Record**. Log in if prompted.
   OR

   Click **Main Menu>Advanced>Record**. Log in if prompted.
2. Under **Record Mode**, select the main stream recording option under each camera or under **All** to configure all cameras:
   - **Schedule**: Camera will record according to settings configured in the schedule.
   - **Manual**: When selected, the camera will use continuous recording.
   - **Stop**: When selected, the camera will not record.
3. Under **Substream**, configure recording options for the substream.
4. Click **OK** to save changes.

14.4.7 Account

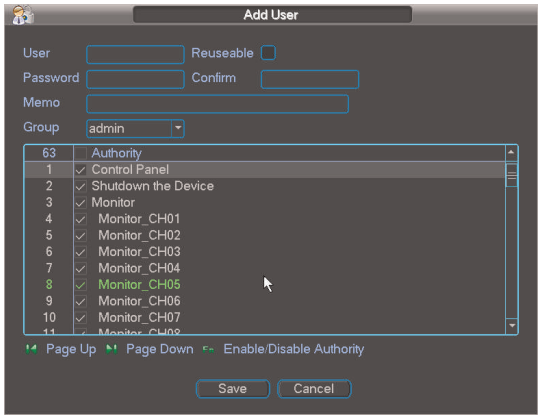


The Account sub-menu allows you to configure user accounts. Accounts are organized into groups, and receive permission to access system functions based on their group's settings. By default, the following user groups are configured on the system:

- **admin**: Accounts in the admin group are system administrators. They have full access to the system, may configure all system settings, and can manage user accounts.
- **user**: Accounts in the user group are normal users. They have limited access to system menus.

14.4.8 Adding Accounts

1. Click **Add User**.



2. Configure the following:

   - **User**: Enter a user name for the account.
   - **Memo (Optional)**: Enter comments for the account.
   - **Password**: Enter a password for the account. Repeat password under **Confirm**.

     Note
     User passwords must be 6 characters.

   - **Reusable**: Check to enable multiple users to connect using this account.
   - **Group**: Select the group that the account will be included in.

3. In the bottom portion of the screen, select the permissions that will apply to the user. By default the account will have all permissions that are enabled for its group. An account cannot have more permissions than its group.
4. Click **Save** to save changes.

14.4.9 Modifying Accounts

Admin accounts may modify the user name, password, and permissions of user accounts. User accounts may modify their own password.

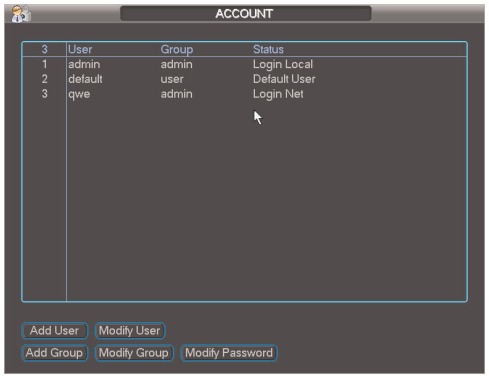
To modify account settings:

1. Click the account in the list.
2. Click **Modify User**.

3. Under **User**, select the account you would like to modify.
4. Configure the account settings and permissions as necessary and then click **Save**.

To modify an account password:

1. Click **Modify Password**.



2. Under **User**, select the account you would like to modify.
3. Under **Old Password**, enter the account's previous password.
4. Under **New Password**, enter the new password for the account. Repeat it under **Confirm**.
5. Click **Save**.

14.4.10 Deleting Accounts

1. Click the account in the list.

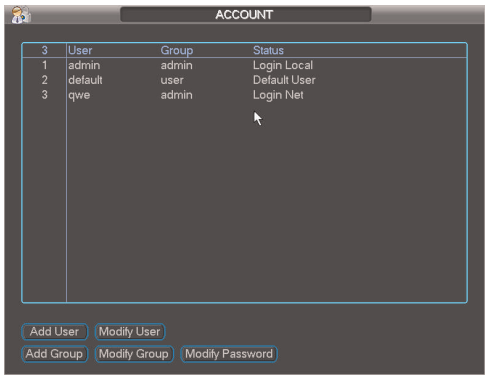
2. Click **Modify User**.
3. Under **User**, select the account you would like to delete.
4. Click **Delete** then click **OK** to confirm.

14.4.11 Adding Groups

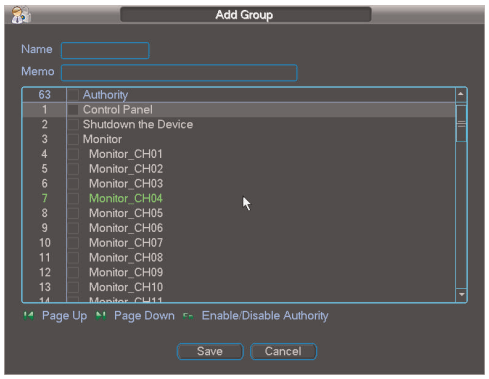
Groups allow you to easily manage permissions for multiple user accounts. A user account by default has all permissions available to the group it is in, and it cannot be given permissions the group does not have.

To add a group:

1. Click **Add Group**.



2. Under **Name**, enter a name for the group.
3. (Optional) under **Memo**, enter comments for the group.
4. Configure group permissions as needed. Note that any user accounts added to the group may not be given any permissions that are not selected.



5. Click **Save**.

14.4.12 Deleting Groups

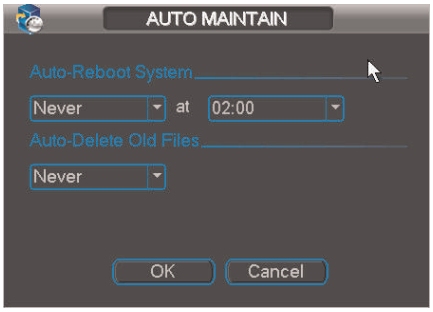
1. Click **Modify Group**.
2. Under **Group**, select the user group you would like to delete.
3. Click **Delete** and then click **OK** to confirm.

14.4.13 Modifying Groups

1. Click **Modify Group**.
2. Under **Group**, select the user group you would like to modify.

3. Update group settings as needed and then click **Save**.

14.4.14 Auto Maintain



The Auto-Maintain sub-menu allows you to configure your system to automatically reboot once a day or once a week. For system stability, it is recommended to enable auto-rebooting.

The Auto-Maintain sub-menu also allows you to set the system to automatically delete files that are older than a specified number of days.

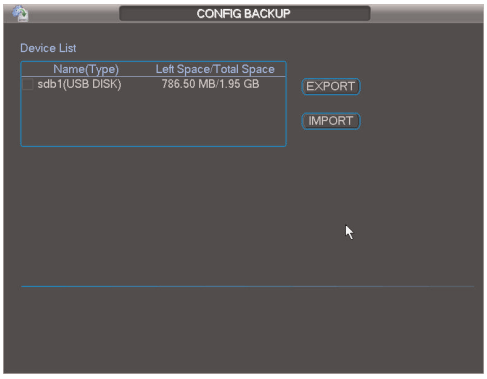
To configure Auto Maintain settings:

1. Under **Auto-Reboot System**, select the day of the week you would like the system to reboot on, select **Everyday** to reboot the system everyday, or select **Never** to disable auto-rebooting. On the right, select the time of day you would like the system to reboot.
2. Under **Auto-Delete Old Files**, select **Never** to disable auto-deleting of old recordings or select **Customized** to enable auto-deleting.
   - If you select Customized, enter the number of days the system will retain recordings.

   Note
   The system must have sufficient storage space to keep recordings for the specified duration.

3. Click **OK** to save changes.

14.4.15 Config Backup



The Config Backup sub-menu allows you to export your system configuration to a USB flash drive (not included) or to import a saved configuration. You can import a saved configuration from another NVR of the same model and channel configuration.

To export the system configuration to a USB flash drive:

1. Insert a USB flash drive into one of the USB ports on the system.
2. Right-click and select **Main Menu>Advanced>Config Backup**.
3. Check the USB flash drive you would like to export to in the list.
4. Click **Export**.

To import a saved system configuration:

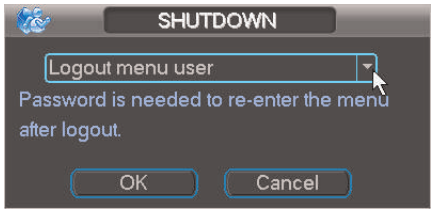
1. Insert a USB flash drive with a saved system configuration into one of the USB ports on the system.
2. Right-click and select **Main Menu>Advanced>Config Backup**.
3. Check the USB flash drive with the saved system configuration file.
4. Click **Import**.
5. Click **OK**. The system will restart.

14.5 Shutdown

Use the Shutdown menu to shutdown, restart, or log out of the system.

To access the Shutdown menu:

1. From live view, right-click and select **Main Menu**. Login if prompted.
2. Click **Shutdown**.
3. Select one of the following:



- **Logout menu user**: Log out the account that is currently active.
- **Switch user**: Log out the account that is currently active, and sign in with a new account.
- **Shutdown.**
- **Restart system.**

4. Click **OK** to complete the selected action.

15 FLIR SyncroIP NVR CMS Central Management Software

FLIR SyncroIP NVR CMS is a central management software that allows you to view and manage multiple NVRs and IP cameras.

15.1 System Requirements

Your system must meet or exceed the system requirements below:

Description	Requirement
CPU	Core 2 Duo 3.0GHz
Operating System	Windows™ 8/7/Vista
Memory	2GB
Video	512 MB of video memory and above
Network (LAN)	10/100 BaseT Network
Network (WAN)	1 Mbps upstream.[1]

Note
To connect to your system on Mac, please visit www.flirsecurity.com/pro for instructions.

15.2 Prerequisites

- Port forward the Client and HTTP ports (default **80** and **35000**) on the router that the NVR or IP camera is connected to.
- Create a DDNS account.
- Enable DDNS in the NVR or IP camera.
- Enter the DDNS information into the NVR or IP camera.
- NVR or IP camera must have access to the Internet or Local Area Network (LAN).

15.3 Installing FLIR SyncroIP NVR CMS

Install FLIR SyncroIP NVR CMS from the CD included with your system or by downloading it from www.flirsecurity.com/pro. It is recommended to visit the website for the latest software versions.

To start the software:

- Double-click the FLIR SyncroIP NVR CMS icon ( ) on the desktop.
- Click **Login**.

1. High-speed Internet service is required to remotely connect to your system.

Note
The CMS default User Name is **admin** and the Password is **admin**.

15.4 Adding a NVR or IP Camera from the Local Area Network (LAN)

Once you open the software, you can add a NVR or IP camera.

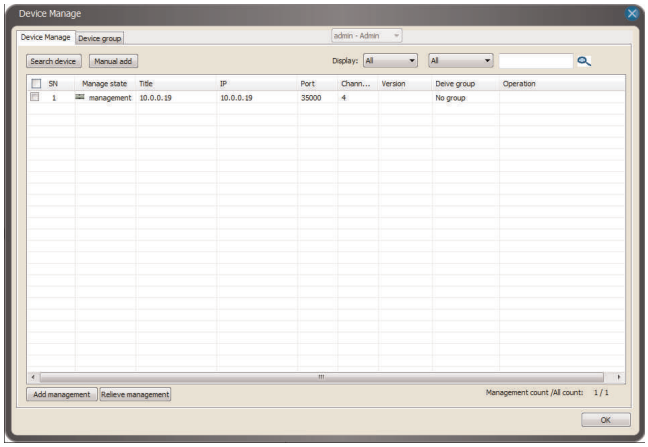
Prerequisites:

- Connect the NVR or IP camera to a router or switch on the network.
- Install the CMS on a computer in the same LAN as the NVR or IP camera.

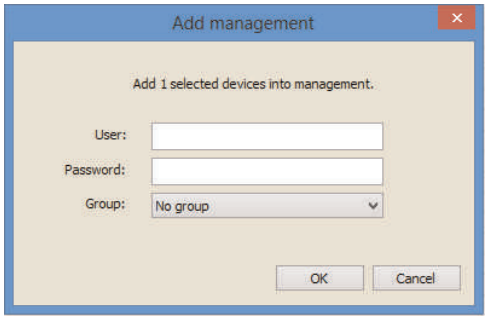
To add a NVR or IP camera:

1. Click **Config Manager>Device Manage**.

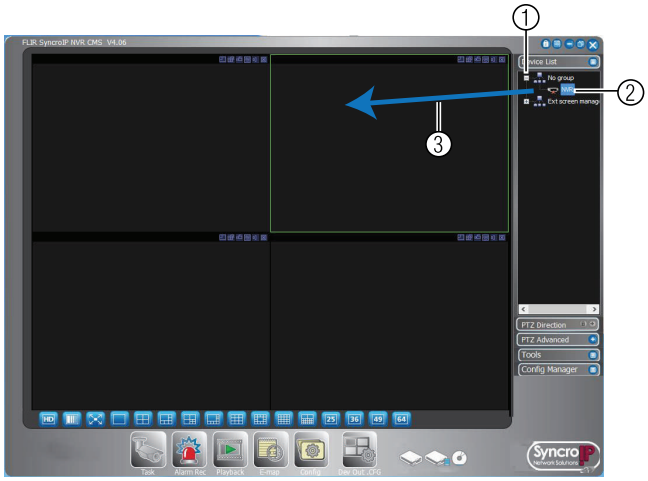
2. Click **Search Device**. If a Windows Firewall alert appears, click **Allow**.
3. Check the NVR or IP camera and click **Add Management**.



4. Enter the system's user name and password (default user name for this system is **admin**and default password is **000000**) and click **OK**.



5. Click **OK**.
6. Click **Device List**.
7. Perform the following steps to open the NVR or IP camera:



   7.1. Click **+** next to **No Group**.
   7.2. Double-click the NVR or IP camera.
   7.3. Click-and-drag the NVR or IP camera to the display area to view.

15.5 Adding a NVR or IP Camera Using a DDNS Address

If you have systems with DDNS set up, you can add them to the CMS.

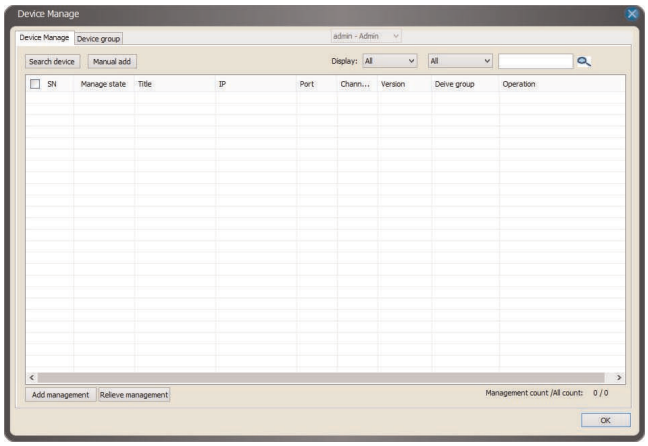
Prerequisites:

- Create a DDNS account. For details, 20 *Setting Up DDNS Service*, page 111.
- Enter the DDNS information into the NVR or IP camera locally.
- Port forward the Client and HTTP ports (default: ports **80** and **35000**) on the router.

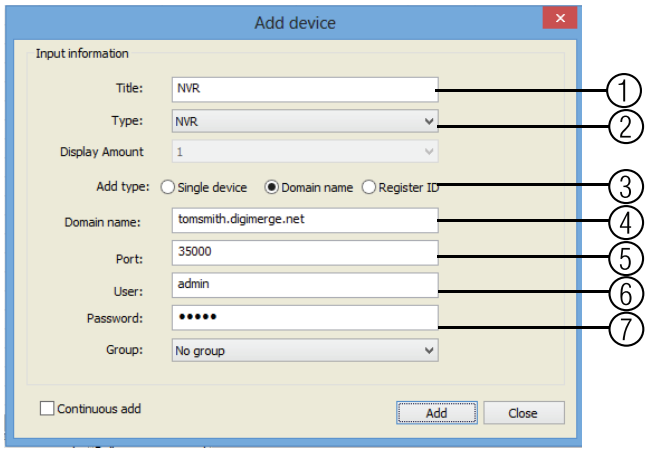
To add a system using a DDNS address:

1. Click **Config Manager>Device Manage**.

2. Click **Manual Add**.



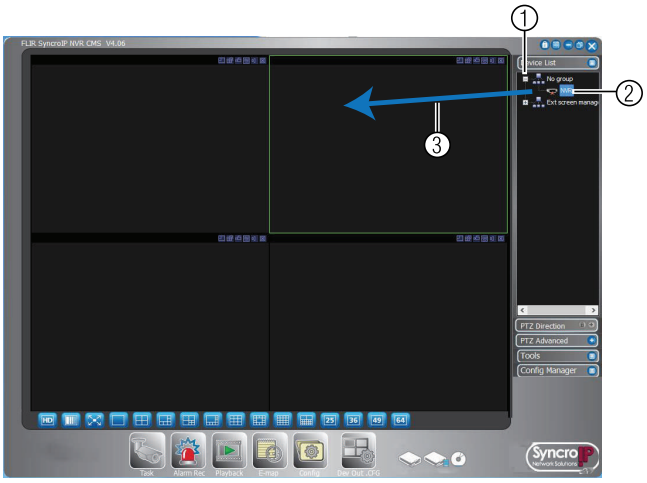
3. Configure the following:



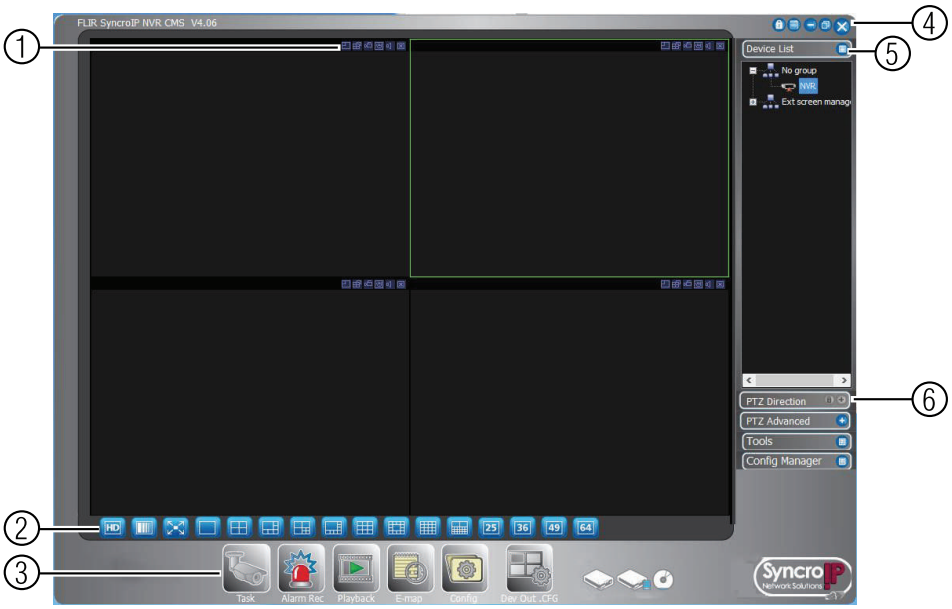
3.1. **Title**: Enter a name for your system of your choice (e.g. home or office).
3.2. **Type**: Select **NVR** for NVRs or **IP Camera** for IP cameras.
3.3. **Add Type**: Select **Domain Name** for NVRs or **Single Device** for IP cameras.
3.4. **Domain Name**: Enter the **Domain Name** from the confirmation email after your registered for DDNS, followed by **.myddns-flir.com.**
3.5. **Port**: Enter the **Client Port** (default: **35000**).
3.6. **User**: Enter the **system's user name** (default for this system:**admin**).
3.7. **Password**: Enter the **system's password** (default for this system: **000000**).

4. Click **Add**, then click **OK**.
5. Click **Device List**.
6. Click **+** next to **No Group**.
7. Perform the following steps to open the NVR:

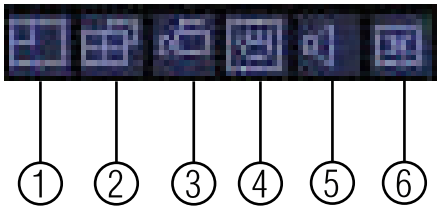
7.1. Click **+** next to **No Group**.
7.2. Double-click the NVR or IP camera.
7.3. Click-and-drag the NVR or IP camera to the display area to view.



15.5.1 CMS Live Viewing Overview

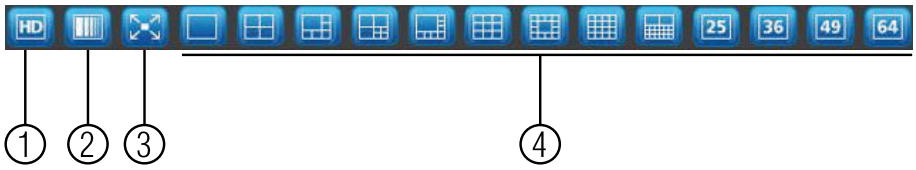


1. **Camera Controls:**



1.1. **Digital zoom**: Click and drag to zoom.
1.2. **Change display mode.**
1.3. **Manual record.**
1.4. **Snapshot.**
1.5. **Mute.**
1.6. **Disconnect.**

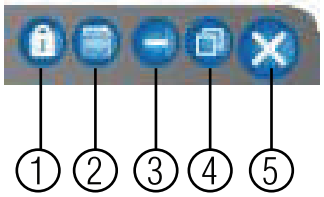
2. **Live View Toolbar:**



2.1. **Select image quality.**
2.2. **Latency/fluency.**
2.3. **Full-screen.**
2.4. **Display views.**

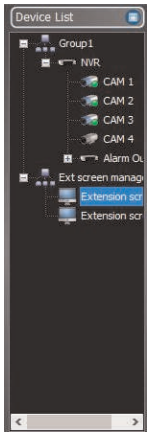
3. **CMS Quick Menus**: Click to access key CMS and NVR or IP camera functions, such as Playback, event search (Alarm Rec), E-Map, and software configuration (Config).

4. **CMS Window Controls**:



4.1. **Lock CMS.**
4.2. **Full menu.**
4.3. **Minimize.**
4.4. **Maximize/restore.**
4.5. **Quit.**

5. **Device List**: Open NVRs and IP cameras in live display.



- Click **+** next to NVRs or Groups to expand.
- Click and drag NVRs, Groups, or IP cameras to the display area to open.
- Right-click NVRs, Groups, or IP cameras to view system options.

6. **CMS Menus**:

- **PTZ Direction**: Access basic PTZ controls.
- **PTZ Advanced**: Access advanced PTZ controls (e.g. Auto Scan, Tour, etc.).
- **Tools**: Contains the following menus: Begin Record Plan, NVD Control, Health Report, Log Search, Alarm Video, Alarm Output, Color Config, Volume.
- **Config Manager**: Contains the following menus: Scheme Task Config, Record Plan Config, Alarm Config, Alarm Rec Config, E-Map Config, DecCard Config, User Manage, Device Manage, Ext Screen Manage, User Config.

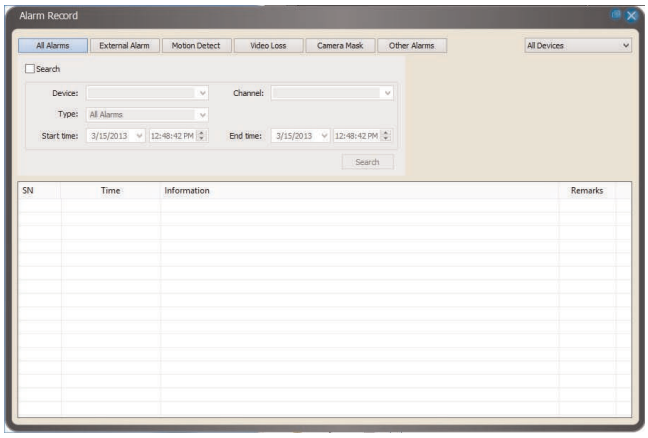
15.6 Using Alarm Rec (Event Search)

Alarm Rec allows you to search for events saved on the system.

To use Alarm Rec:

1. Click **Alarm Rec** ( ).
2. At the top of the screen, select the alarm type you would like to search.

3. Configure the following:



- Check **Search**
- Under **Device**, select the system and channel you would like to search.
- Enter the **Start time** and the **End time** for the search.
- Click **Search**.

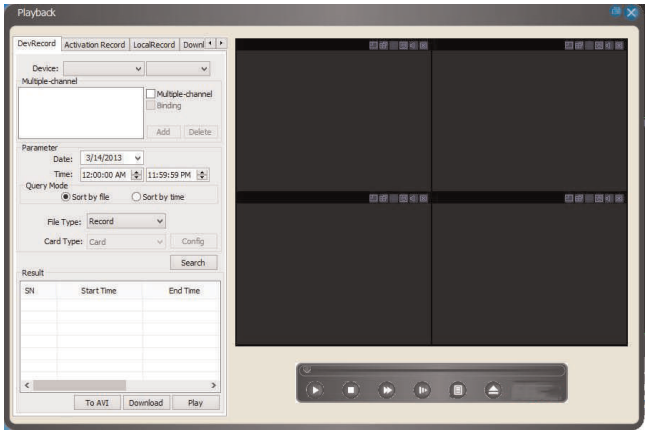
4. Click **Search**. A list of relevant alarms appears below.

15.7 Using Playback Mode

You can view recorded footage from your systems in the CMS software.

To use playback mode:

1. Click **Playback** ( ).
2. Under **Device**, select the system and channel you would like to search.



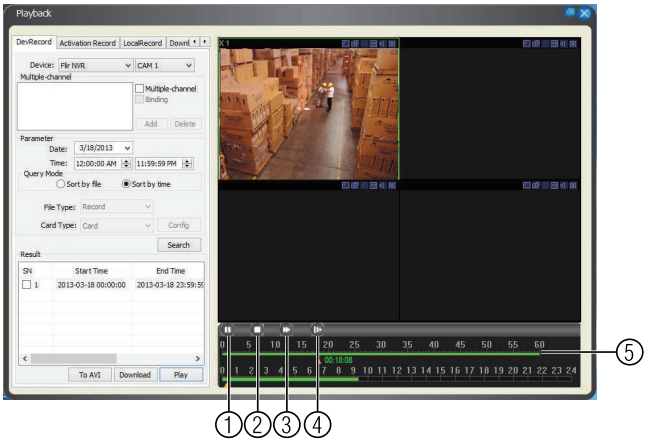
- Check **Multiple channel** to playback video from multiple cameras. Select camera and then click **Add**. Repeat to add additional cameras.

3. Under **Parameter**, select the start and end time for the search.
4. Click **Search**.

5. Select one of the following:
   - Check video files to select and click **Play** to open.
   - Click **Download** to download the video files to the local computer.
   - Click **To AVI** to convert the video files to AVI and save to your local computer.

> **Note**
> You must stop playback before you may download video files.

15.7.1 Playback Controls



1. **Pause/play.**
2. **Stop.**
3. **Fast.**
4. **Slow.**
5. **Playback bars**: Click and drag to select playback time. Use the top bar to select minutes and the bottom to select hours.

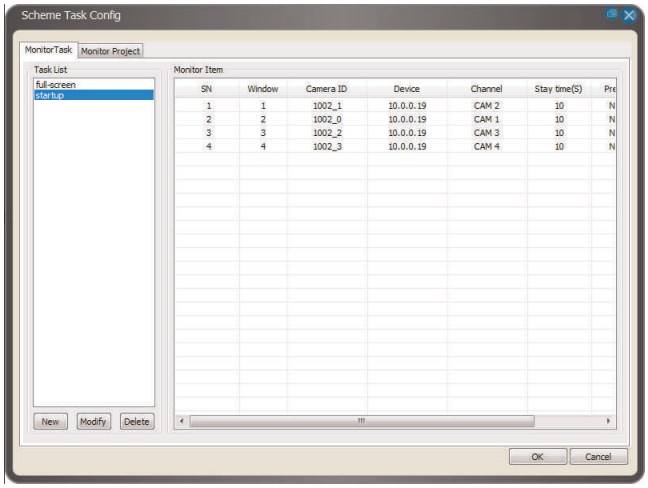
15.8 Configuring Monitoring Tasks and Projects

Tasks are used to configure the CMS to automatically cycle through different channel arrangements. Projects are used to automatically cycle through multiple tasks.

15.8.1 Configuring Tasks

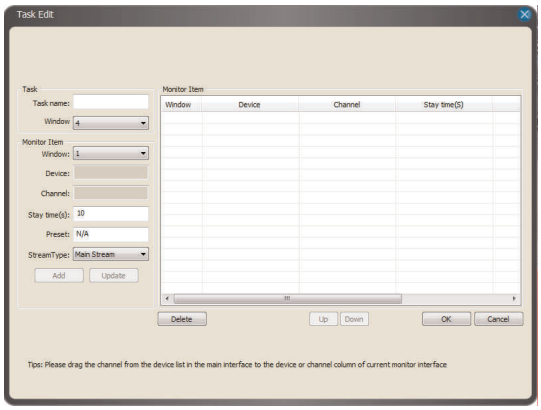
1. Click **Config Manager>Scheme Task Config**.

2. Select the **Monitor Task** tab.

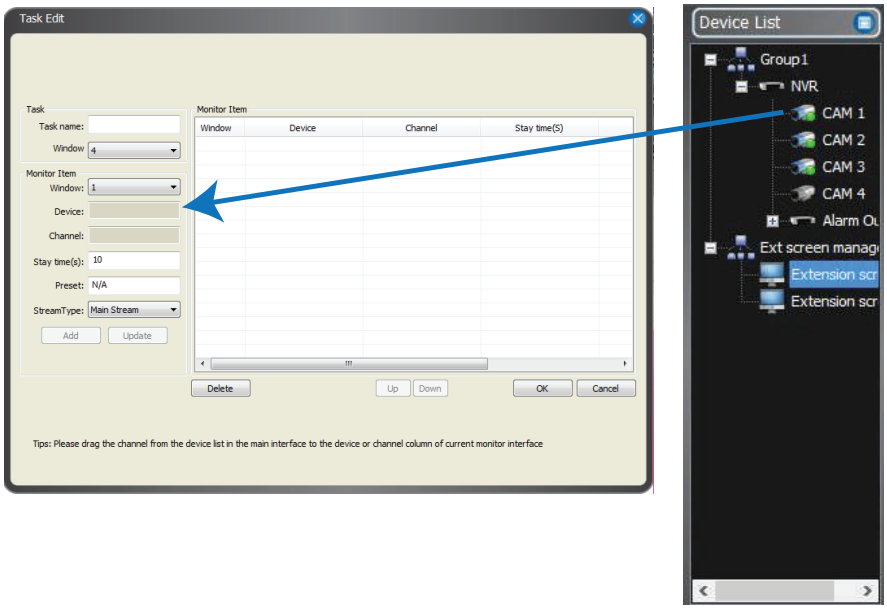


3. Click **New**.
4. Enter a **Task Name** of your choice.
5. Under **Window**, select the split-screen mode you would like to show in the task.

6. Under **Monitor Item**, configure the following:



- **Window**: Select the display window you would like to configure.
- **Stream Type**: Select **Main Stream** or **Extra Stream** to view the substream.
- **Device**: Click and drag the camera from the Device List in the main CMS window to the field to add it.



7. Click **Add**. Repeat Steps 6 & 7 to configure additional screens.
8. Click **OK**. Click **OK** to save changes.

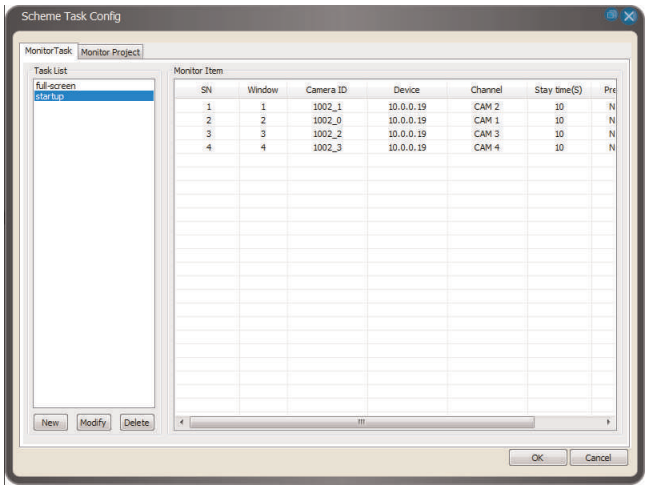
15.8.2 Configuring Projects

Once you have multiple tasks set up, you can configure projects to automatically cycle through them.

To configure a project:

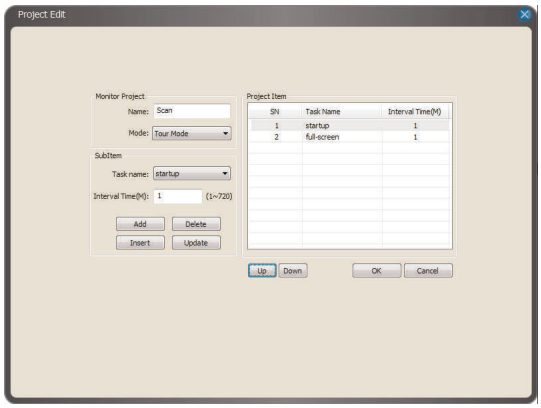
1. Click **Config Manager>Scheme Task Config**.

2. Click **Monitor Project**.



3. Click **New**.
4. Enter a **Name** for the project.

⚠ **CAUTION**
You may not change the name after the project is created.



5. Under **Mode**, select **Tour Mode** or **Schedule Mode**. Tour Mode will cycle through tasks on a fixed interval. Schedule Mode will switch tasks at a pre-defined time of the day.
6. Under **Task Name**, select the task you would like to add to the project.
   - If you select **Tour Mode**, enter the **Interval Time** in minutes that the task will run for before changing to the next task.
   - If you select **Schedule Mode**, enter the time of day when the task will start running.
7. Click **Add**.
8. Repeat steps 6-7 for each additional task you would like to add to the project.
9. Click **OK**. Click **OK** to save changes.

15.8.3 Running Tasks and Projects

- Once you have configured tasks or projects, you may run them by clicking **Task (** **)** and then selecting the task or project you would like to run.
- You may also select a task or project to run when you first launch the CMS. For details, .

15.9 Using E-Map

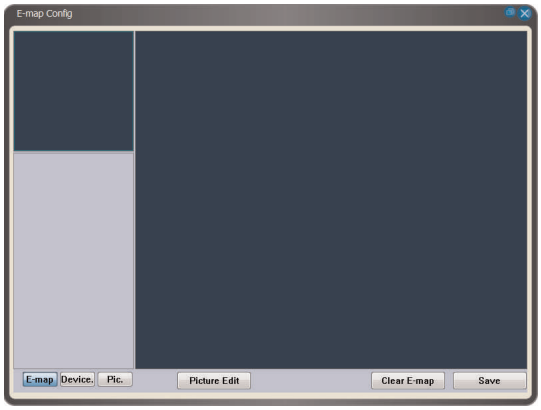
The E-Map feature allows you to visually map your cameras over a .jpg image.

15.9.1 Configuring E-Map

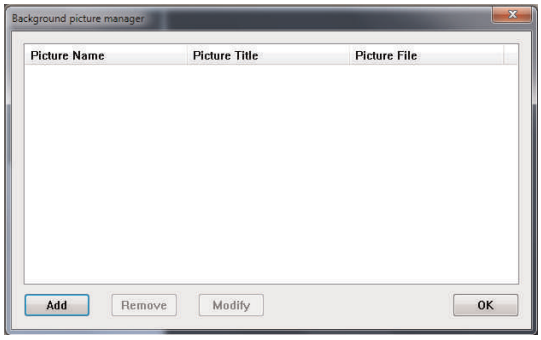
Use the steps below to select a .jpg image to use for the E-Map and place your cameras.

To configure the E-Map:

1. Click **Config Manager>E-Map Config**.
2. Click **Picture Edit**.

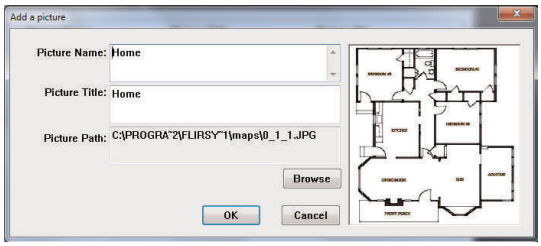


3. Click **Add**.

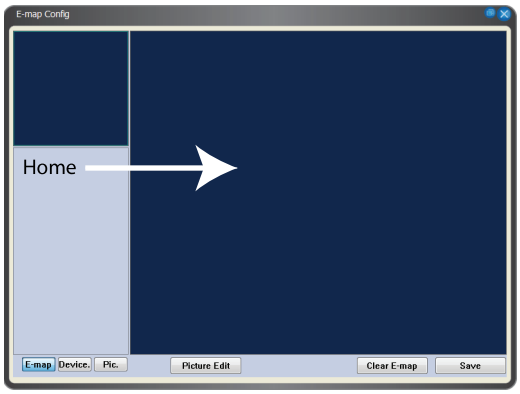


4. Click **Browse**. Select a .jpg image on your computer to use as the E-Map.

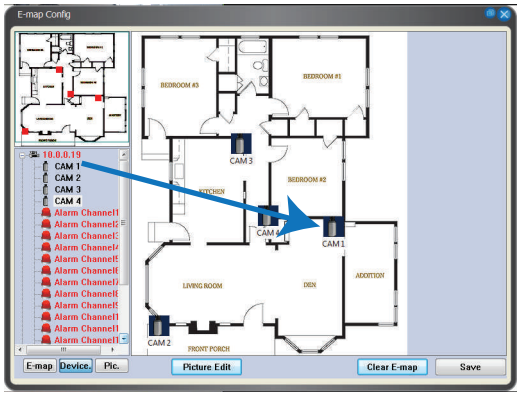
5. Enter a **Name** and **Title** for your E-Map of your choice.



6. Click **OK**.
7. Click **Pic**.



8. Click-and-drag the picture to the window to use it for the E-Map.
9. Click **Device** to view a list of connected NVR's.
10. Click **+** next to an NVR. To place cameras, drag cameras from the list to the map.



11. Click **Save**.

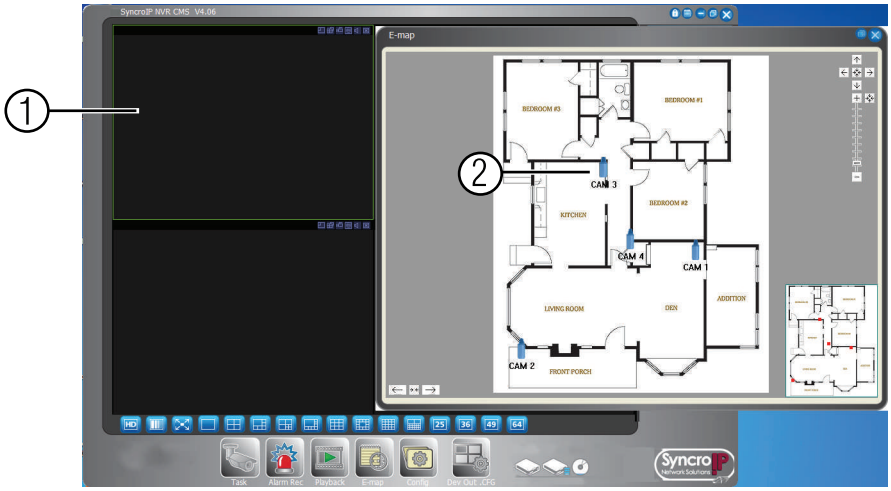
> **Note**
> To delete all E-Map data, including images and camera positions, click **Clear E-Map**.

15.9.2 Opening Cameras from E-Map

Once you have configured your E-Map, you can use it to open cameras in live display.

To open cameras from E-Map:

1. Click **E-Map (** **)**. Click on a display area in the main CMS window.
2. Double-click on the camera to open it in the selected display area.

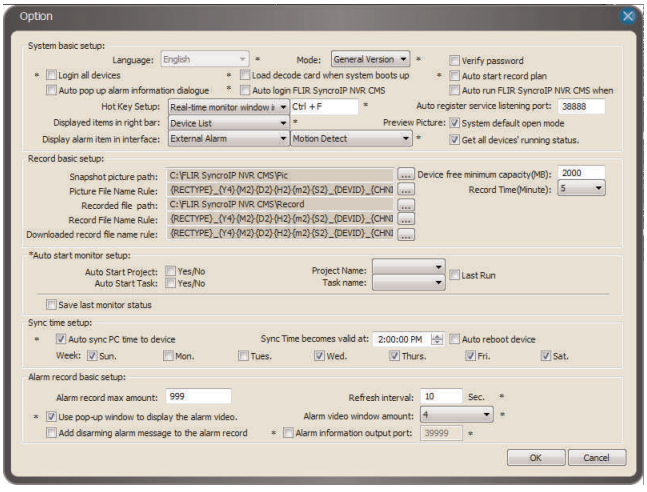


15.10 Configuring the CMS

You can configure settings for the CMS such as the admin password, recording directories, and start up settings through the Config menu.

To configure CMS options:

1. Click **Config(** **)>Options**.
2. Configure the following:



- **Verify password**: Check to require passwords when logging into or closing the CMS.
- **Log in all devices**: Check to allow the CMS to log into all sytems when it opens.
- **Auto start record plan**: Check to have the CMS automatically start the record plan, which allows recording to the computer hard drive when it opens. To configure the record plan, click **Config Manager>Record Plan Config**.

- **Auto Login FLIR SyncroIP NVR CMS**: Check for the CMS to automatically log in the admin account when it is opened.
- **Hotkey Setup**: Configure hotkeys for the CMS. Use the drop-down menu to select the command, and then click inside the box on the right and enter the hotkey.

Note
Do not use F12 as a hotkey. F12 is reserved for the system debug command.

- **Displayed items in the right bar**: Select which right-side menu is opened when the CMS opens.
- **Record Time (M)**: Select the length in minutes of video files recorded on your computer hard drive. For example, if you select 15 minutes, the system will save a new video file for every 15 minutes of recording.
- **Snapshot picture path**: Click **...** to select the default save folder for snapshots.
- **Picture file name rule**: Click **...** to define the file name rule for snapshots.
- **Recorded file path**: Click **...** to select the default save folder for manual recordings.
- **Recorded file name rule**: Click **...** to select the file name rule for manual recordings.
- **Downloaded file path**: Click **...** to select the folder for downloaded recording files.
- **Download record file name rule**: Click **...** to define the file name rule for downloaded recording files.
- **Device free minimum space (MB)**: Enter the amount of minimum space in MB to maintain on the computer hard drive. The system will stop recording when only this much space is left.
- **Auto Start Project**: Check for the CMS to automatically run a project when opened. Select the project it will run under **Project Name**.
- **Auto Start Task**: Check for the CMS to automatically run a task when opened. Select the task it will run under **Task Name**.
- **Last Run**: Check for the CMS to start the last used task or project when opened.
- **Save last monitor status**: Check to have the CMS restore the previously used display mode when opened.
- **Auto sync PC time to device**: Check to have the NVR sync the clock with the system time on the PC.
- **Sync time becomes valid at**: Select the time that the NVR will sync its clock with the PC's system time.
- **Week**: Select days that the NVR will sync its clock with the PC's system time.
- **Auto reboot device**: Check to enable the NVR to reboot when the time sync occurs.

3. Click **Ok** to save changes. Close the CMS and restart it to update the configuration.

15.10.1 Changing the CMS Admin Password

You can change the admin password that is used to log into the CMS. The default password is **admin**.

Note
The CMS will automatically populate the admin password unless you enable **Verify Password** under **Config>Options**.

To change the CMS admin password:

1. When logged in as the admin account, click **Config(** **)>Modify Password**.
2. Under **Old Password**, enter the old password.

3. Under **New Password** and **Confirm Password**, enter the new password.

4. Click **OK**.

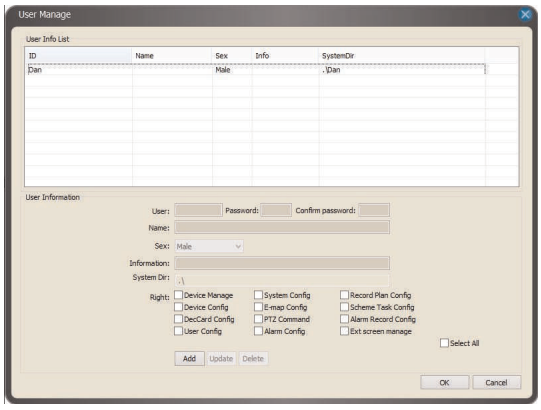
15.11 Adding User Accounts to the CMS

You can create multiple user accounts to the CMS with varying levels of access to the system. These user accounts are only used for access to the CMS software and are separate from the passwords on the individual NVR or IP camera systems.

Note
To make sure users must enter their user name and password to access the CMS, you must make sure Verify User is checked and Auto Login is unchecked in Config>Options. For details, .

To add a user account to the CMS:

1. Click **Config Manager>User Manage**.
2. Click **Add**.



3. Configure the following:
   - **User**: Enter the user name for the account.
   - **Password/Confirm**: Enter the password for the account.
   - **Name/Sex/Information**: (Optional) Enter descriptive details about the user account.
   - **Right**: Check the permissions that will apply to the user account.
4. Click **Save**. Click **OK** to save changes.

15.12 Multi-Monitor Support

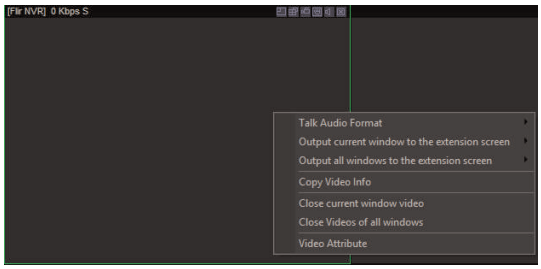
The CMS supports up to 4 monitors on a single system. The recommended system specifications are listed below. If your system does not meet the requirements below, you may experience slow system performance.

Minimum system recommendations to run the CMS on multiple monitors:

- Intel Core i5 or i7 processor.
- 6 GB of RAM.
- Geforce 9500GT video card, 1GB or greater.

15.12.1 Opening Cameras in Secondary Monitors

- **To open a single channel on a secondary monitor**: Open it in a window on the main screen, then right-click on the display area, and select **Output current window to extension screen**. Select the monitor you would like to send the channel to.
- **To open multiple-channels on a secondary monitor**: Open your desired channel view, then right click in the display area, and select **Output all windows to extension screen**. Select the monitor you would like to send them to.


[Flir NVR] 0 Kbps S
Talk Audio Format
Output current window to the extension screen
Output all windows to the extension screen
Copy Video Info
Close current window video
Close Videos of all windows
Video Attribute

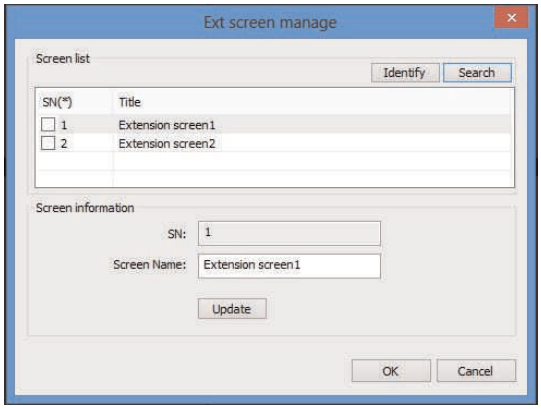
15.12.2 Managing Secondary Monitors

Use Ext Monitor Config to configure settings for secondary monitors. You can select which monitors you would like to enable. Enabled monitors start up when you open the CMS software.

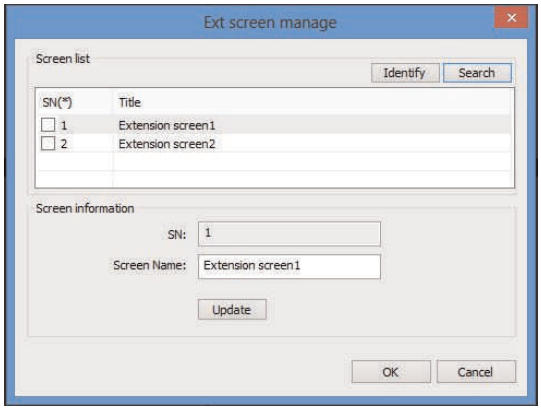
You can close secondary monitors by clicking on them and then pressing **ESC**. However, you must close the CMS software and restart it to re-open windows on secondary monitors.

To manage secondary monitors:

1. Click **Config Manager>Ext Screen Manager**.
2. Click **Search** to detect secondary monitors or **Identify** to display the monitor number assigned to each secondary monitor.



3. Check monitors to open them when the CMS software opens or uncheck to disable.



4. Click **OK** to save changes. Restart the CMS software to open the new monitor configuration.

16 Remote Viewing On Internet Explorer

You can also view your system remotely using Internet Explorer (version 8 or later required).

Note
Remote viewing is only compatible with Internet Explorer. Mozilla Firefox, Opera, Safari, and other browsers are not supported.

16.1 Prerequisites

- The HTTP Port (default: **80**) and Client Port (default: **35000**) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR. For details, 20 *Setting Up DDNS Service*, page 111.
- The NVR must have internet access.

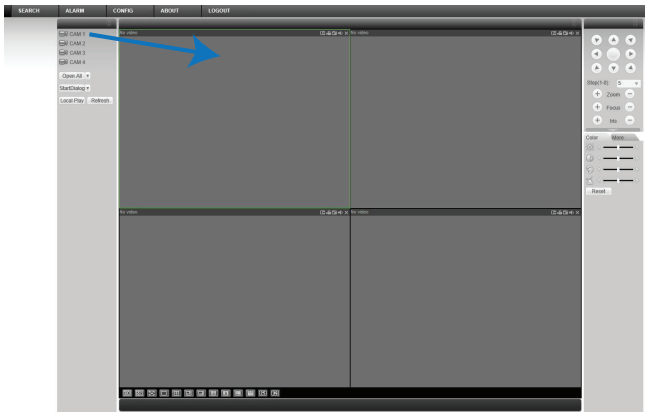
To view your system using Internet Explorer:

1. Open Internet Explorer. It is recommended to select **Run as Administrator** when opening Internet Explorer to ensure full functionality.
2. In the address bar, enter your system's IP address or DDNS address followed by the HTTP Port (default: 80). For example, *http://192.168.1.1:80* or *http://tomsmith.myddns-flir.com:80*.

   Note
   You MUST include http:// in order to access your system.

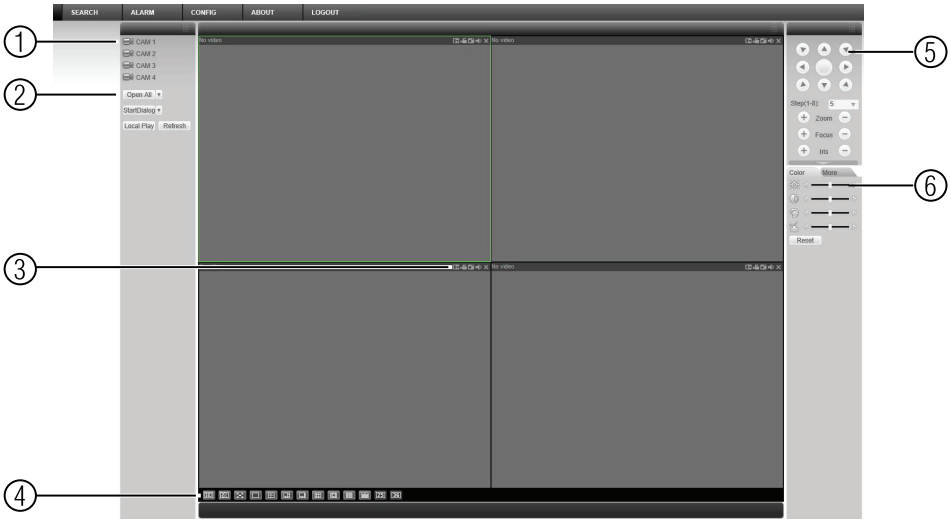
3. An attention bar appears at the top or bottom of the screen to prompt you to install ActiveX plugins, click **Install** or **Allow** and follow the prompts to install the plugins.
4. Enter the system user name and password (by default **admin** / **000000**).
5. Select **LAN** to connect using the main (high quality) stream. Select **WAN** to use the substream to conserve bandwidth and for improved performance when connecting over the Internet.
6. Click **Login** to log in.

7. Click and drag cameras to the display window to view them live.



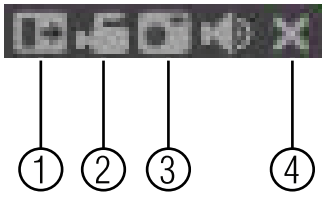
16.1.1 IE Live Display Overview

Note
Some options are not available in WAN mode.



1. **Cameras**: Click and drag to the display area to view.
2. **Live View Controls**:
   - **Open All**: Click to open all cameras.
   - **Local Play**: Open recorded or back up video files (.dav) saved on the local computer.
   - **Refresh**: Click this button to refresh monitor channel name.

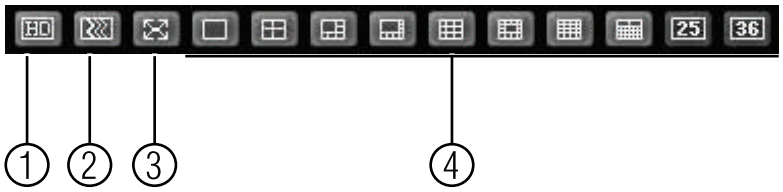
3. **Camera Controls**:



3.1. **Digital zoom**: Click and drag to select the zoom area.
3.2. **Manual record.**
3.3. **Snapshot.**
3.4. **Close.**

Note
Manual Recordings are saved to *C:\RecordDownload*. Snapshots are saved to *C:\PictureDownload*. You must select Run as Administrator when you open Internet Explorer to use these functions.

4. **Live View Toolbar**:



4.1. **Select image quality.**
4.2. **Fluency/latency.**
4.3. **Full-screen.**
4.4. **Select display view.**

5. **PTZ Controls.**
6. **Color Settings**: Use the sliders to adjust the brightness, contrast, saturation, and hue for the selected camera.

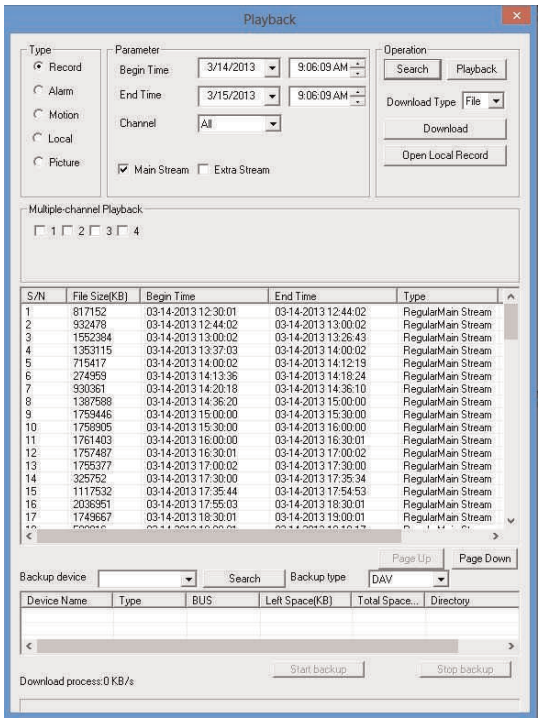
16.1.2 Using Search Mode in IE (Playback)

You can access recorded video from your NVR using the Internet Explorer client.

To access recorded video from your NVR:

1. Click **Search**.

2. Configure the following search options:



- **Type**: Select the type of recording to search for.
- **Begin Time/End Time**: Select the start and end for your search.
- **Channel**: Select the channel you would like to search or select **All**.
- **Main Stream**: Check to search for main stream recordings.
- **Substream**: Check to search for Substream recordings. Substream recordings are lower quality recordings that may be saved on the system to reduce the bandwidth required for remote playback.

3. Click **Search**.
4. Under **Multiple-channel Playback**, select the channels you would like to playback.
5. Click a search result and then click **Playback** to open or **Download** to save the file to your computer hard drive.

17 Mobile Connectivity

The system is compatible with iPhone, iPad and Android devices.

Platform	Supported Versions and Devices	App Name	Get App From
iOS	iOS v. 6.0 and higher iPhone/iPad (1st generation and above)	**iPhone**: FLIR SyncroIP NVR **iPad**: FLIR SyncroIP NVR HD	Apple App Store
Android	Android v. 2.3.3 and above	**Phones**: FLIR SyncroIP NVR **Tablets**: FLIR SyncroIP NVR HD	Google Play Store

See www.flirsecurity.com/pro for the latest compatibility list.

17.1 iPhone

FLIR SyncroIP NVR is an iPhone app that allows you to remotely view your system.

17.1.1 System Requirements

- iOS 4.3 or later.

17.1.2 Prerequisites

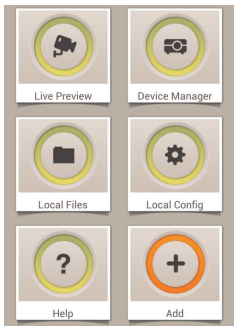
- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded to your router.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera.
- The NVR or IP camera must have internet access.
- You must have a DDNS address to log in remotely.
- An iTunes account.

Note
You will need to create an iTunes account before you can download the app. An iTunes store account requires a valid credit card number. The app is free of charge.

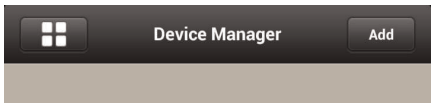
17.1.3 Connecting to your system on an iPhone

1. Download **FLIR SyncroIP NVR** for free from the App Store.
2. Tap on the FLIR SyncroIP NVR icon ( ) to start the app.
3. Tap .

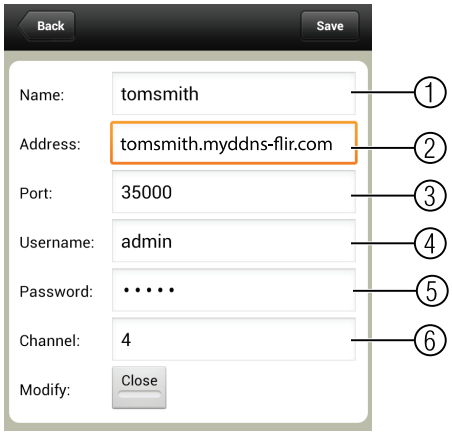
4. Tap **Device Manager**.



5. Tap **Add>Manually Add**.



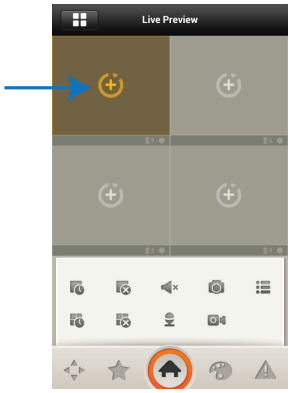
6. Configure the following:



   6.1. **Name**: Enter a name for your system of your choice.
   6.2. **Address**: Enter your DDNS address (e.g. *tomsmith..myddns-flir.com*).
   6.3. **Port**: Enter the Client Port (default: **35000**).
   6.4. **Username**: Enter the system's User Name (default: **admin**).
   6.5. **Password**: Enter the system's Password (default: **000000**).
   6.6. **Channel**: For NVRs, enter the number of channels your NVR has. For IP cameras, enter **1**.

7. Tap **Save**.
8. Tap .
9. Tap **Live Preview**.

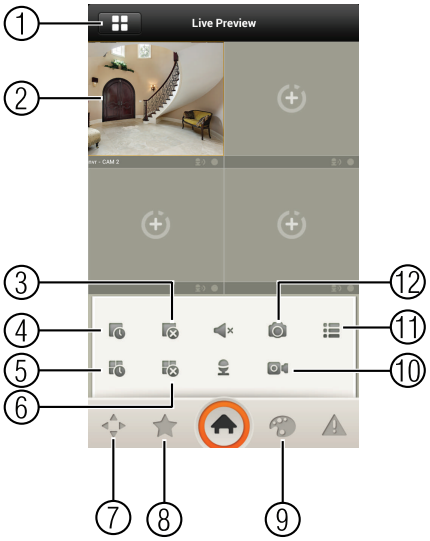
10. Tap **+** on one of the display areas and select the camera you would like to open in the selected display area.



11. Repeat to view additional cameras.

17.1.4 Live View Interface

You can use FLIR SyncroIP NVR in portrait and landscape mode.



1. **Back**: Return to Main Menu.
2. **Display area**: Double-tap to open a channel in full screen.
3. **Disconnect**: Disconnect from camera.
4. **Connect**: Connect to camera.
5. **Connect all**: Connect to all previously added cameras.
6. **Disconnect all**: Disconnect from all cameras.
7. **PTZ**: Access PTZ controls (PTZ camera required).
8. **Access Favorites.**
9. **Open image settings.**
10. **Manual record**: Tap to start/stop manual recording.
11. **Change camera.**
12. **Snapshot.**

17.1.5 Viewing Videos with Local File

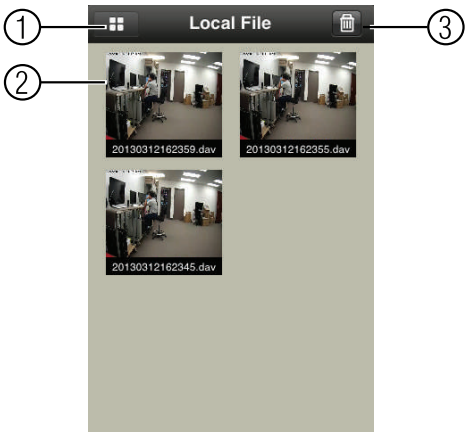
If you have saved videos using the app, you may open them with Local File.

Note
You may open screenshots using the Photos app.

To access Local File:

- From the Main Menu, tap **Local File**.

Local File Controls



1. **Back**: Return to Main Menu.
2. **Files**: Tap files to open.
3. **Delete all files.**

17.1.6 Using Playback Mode on iPhone

You can access recorded video on your system using your iPhone.

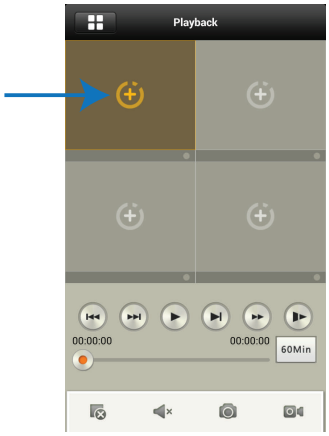
Note
You must enable Sub Stream Recording to use playback mode on mobile devices. For details on enabling Sub Stream Recording, see 14.4.6 *Record*, page 47.

To use Playback Mode:

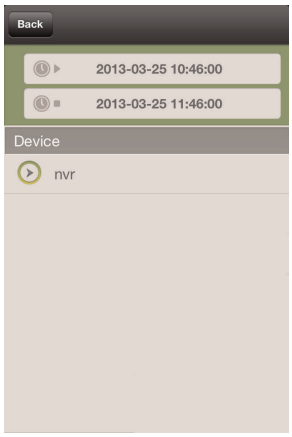
1. From the Main Menu, tap **Playback**.

Note
If Playback is not shown, tap **Add**, check **Playback**, and return to the Main Menu.

2. Tap **+**.

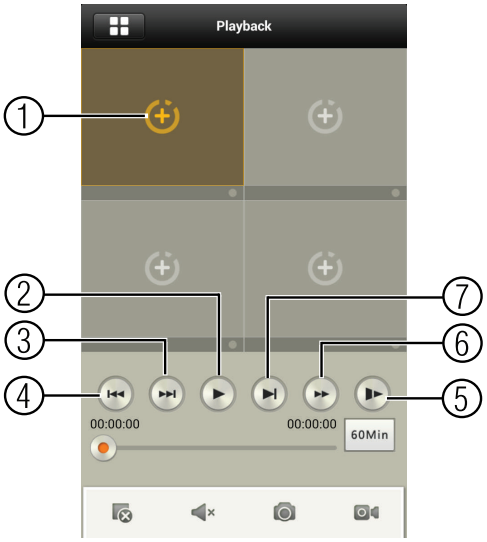


3. Select the start and end times to playback.



4. Select a channel to playback.
5. Use the on-screen controls to control playback.

Playback Controls



1. **Display area**: Double-tap to open in full-screen.
2. **Play/pause.**
3. **Next**: Select next video file.
4. **Previous**: Select previous video file.
5. **Slow.**
6. **Fast.**
7. **Next frame.**

17.1.7 Enabling Push Notifications

You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video from the camera that detected motion.

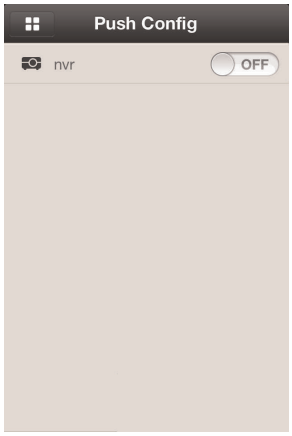
Note
Your cameras must have motion detection activated to receive push notifications. For details on enabling motion detection, see 14.2.14 *Motion*, page 38.

To enable Push Notifications:

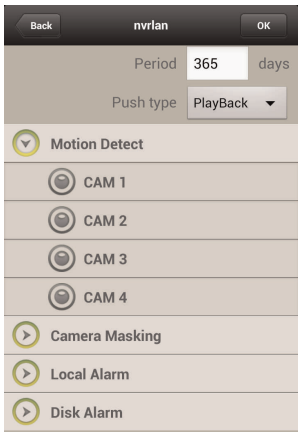
1. From the Main menu, tap **Push Config**.

   Note
   If Push Config is not shown, tap **Add**, check **Push Config**, and then return to the Main Menu.

2. For the system you would like to configure, set the slider to **ON**.

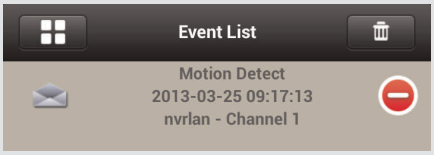


3. Tap **Motion Detect** and then check each channel you would like to receive push notifications from.



4. Tap **OK**. A test notification will be sent to your device. After this, whenever the selected cameras detect motion, you will receive a notification.

Note
You can see a list of notifications through the Event List menu. To show the Event List menu, tap Add and check Event List. Return to the Main Menu and select Event List. Tap on events to view live video from the camera.



17.1.8 Device Manager

You can use Device List to manage your systems.

To access Device List:

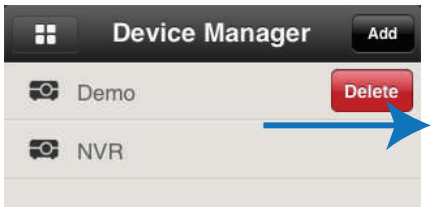
- From the Main Menu, tap **Device Manager**.

To edit a system:

1. Tap the system in Device Manager.
2. Edit the connection details as needed.
3. Tap **Save**.

To delete a system:

1. Swipe right on the system you would like to delete.



2. Tap **Delete**. Tap **OK** to confirm.

17.2 iPad

FLIR SyncroIP NVR HD is an iPad app that allows you to remotely view your system.

17.2.1 System Requirements

- iOS 4.3 or later.

17.2.2 Prerequisites

- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded on your router to your system's IP address.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera.
- The NVR or IP camera must have internet access.
- You must have a DDNS address to log in remotely.

Note
You will need to create an iTunes account before you can download the app. An iTunes store account requires a valid credit card number. The app is free of charge.

17.2.3 Connecting to your NVR on an iPad

1. Install FLIR SyncroIP NVR HD for free from the App Store.
2. Tap on the FLIR SyncroIP NVR HD icon ( ) to start the app.
3. Tap then .
4. Tap **Device Manager**.

5. Tap **Add**.

6. Configure the following:

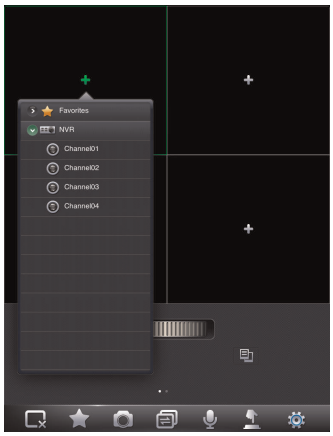
   6.1. **Name**: Enter a name for your system of your choice.
   6.2. **Address**: Enter your DDNS address (e.g. *tomsmith.myddns-flir.com*).
   6.3. **Port**: Enter the Client Port (default: **35000**).
   6.4. **Username**: Enter the system's User Name (default: **admin**).
   6.5. **Password**: Enter the system's Password (default: **000000**).
   6.6. **Channel Amount**: For NVRs, enter the number of channels your NVR has. For IP cameras, enter **1**.

7. Tap **Save**.

8. Tap

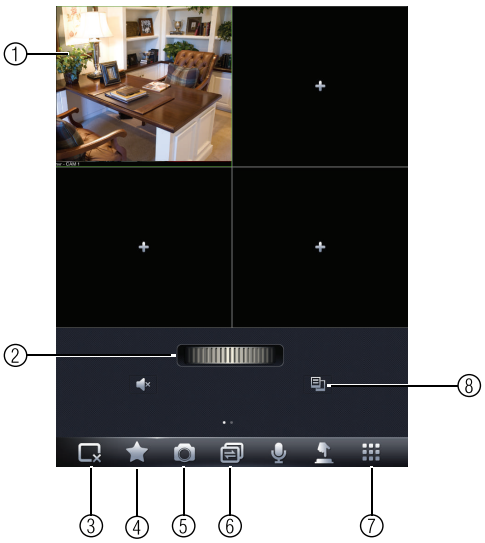
9. In landscape mode: tap a channel and then select the camera you would like to view on the left.
   OR

   In portrait mode: tap **+** on one of the display areas and select the camera you would like to open.



17.2.4 Live View Interface

You can use FLIR SyncroIP NVR HD in landscape or portrait mode.



1. **Display area**: Double-tap to open camera in full screen.
2. **Favorites**: Slide to select favorites.
3. **Disconnect all**: Disconnect all cameras.
4. **Add to favorites**: Add the current view to favorites.
5. **Shapshot.**
6. **Change display view.**
7. **Open menus.**
8. **Select different camera.**

17.2.5 Device Manager

Device Manager allows you to manage your systems.

To access Device Manager:

1. From live view, tap then .
2. Tap **Device Manager**.

To delete a system:

1. Tap the system to select it.
2. Tap . Tap **Yes** to confirm.

To modify a system:

1. Tap a system to select.
2. Tap the system again to open the edit screen.
3. Update the connection details as needed and then tap **Save**.

17.2.6 Using Playback Mode on iPad

You can access recorded video on your system using your iPad.

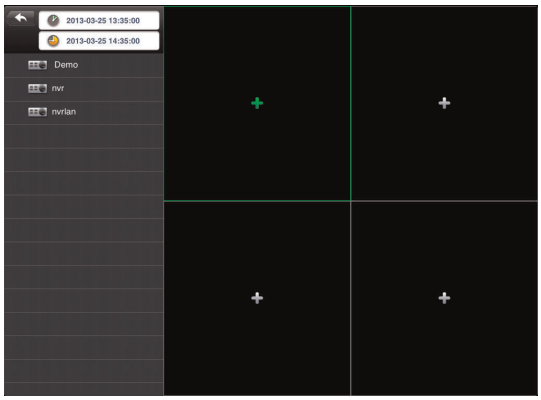
Note
You must enable Substream Recording to use playback mode on mobile devices. For details on enabling Substream Recording, see 14.4.6 *Record*, page 47.

To use Playback Mode:

1. From Live View tap then .

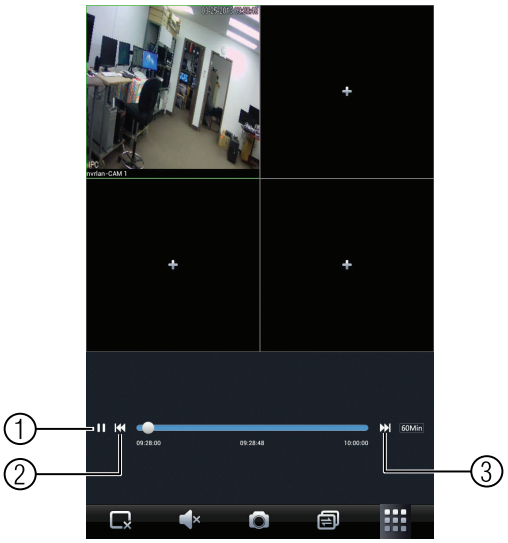
2. In Portrait Mode: Tap **+**, select the start time and end time for your search, and select the camera you would like to playback.
   OR

   In Landscape Mode: Select the start time and end time for your search, and select the camera you would like to playback.



3. Use the playback controls.

Playback Controls

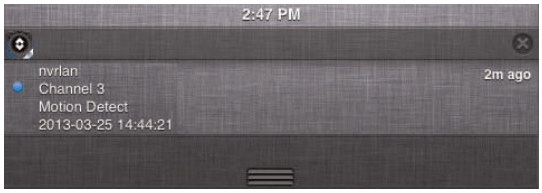


1. **Play/pause.**
2. **Previous file.**
3. **Next file.**

Note
Playback controls are only shown in portrait mode.

17.2.7 Enabling Push Notifications

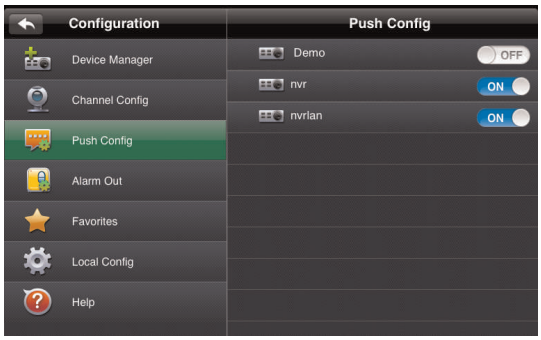
You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video from the camera that detected motion.



Note
Your cameras must have motion detection activated to receive push notifications. For details on enabling motion detection, see 14.2.14 *Motion*, page 38.

To enable Push Notifications:

1. From live view, tap then .
2. Tap **Alarm Push**.
3. Set the slider to **ON** next to the system you would like to configure.

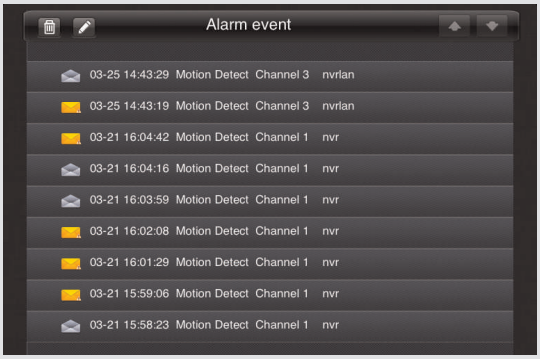


4. Tap **Motion Detect** then check each channel you would like to receive push notifications from.

5. Tap **OK**. A test notification will be sent to your device. After this, whenever the selected cameras detect motion, you will receive a notification.

Note

You can see a list of notifications through the Event List menu. To show the Event List menu, from live view, tap then .


Alarm event
03-25 14:43:29 Motion Detect Channel 3 nvrlan
03-25 14:43:19 Motion Detect Channel 3 nvrlan
03-21 16:04:42 Motion Detect Channel 1 nvr
03-21 16:04:16 Motion Detect Channel 1 nvr
03-21 16:03:59 Motion Detect Channel 1 nvr
03-21 16:02:08 Motion Detect Channel 1 nvr
03-21 16:01:29 Motion Detect Channel 1 nvr
03-21 15:59:06 Motion Detect Channel 1 nvr
03-21 15:58:23 Motion Detect Channel 1 nvr

17.3 Android Phones

FLIR SyncroIP NVR allows you to remotely view your system on Android smartphones.

A separate app is available for remote viewing on Android tablets, to make better use of the larger screen size. For details, 17.4 *Android Tablets*, page 96.

17.3.1 Compatible Devices

- Android OS (2.2 and above).

17.3.2 Prerequisites

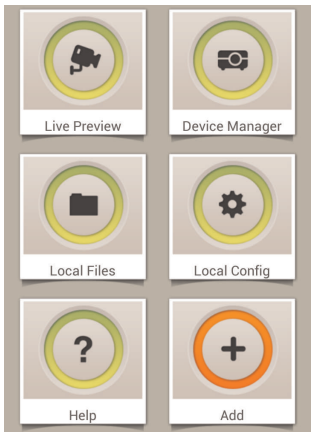
- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded on your router to your system's IP address.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera.
- The NVR must have internet access.
- You must have a DDNS address to log in remotely.

17.3.3 Connecting to your NVR on an Android Phone

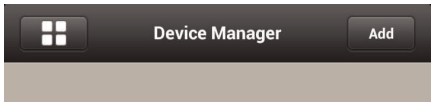
1. Download FLIR SyncroIP NVR for free from the Google Play Store.
2. Tap on the FLIR SyncroIP NVR icon ( ) to start the app.

1. Tap .

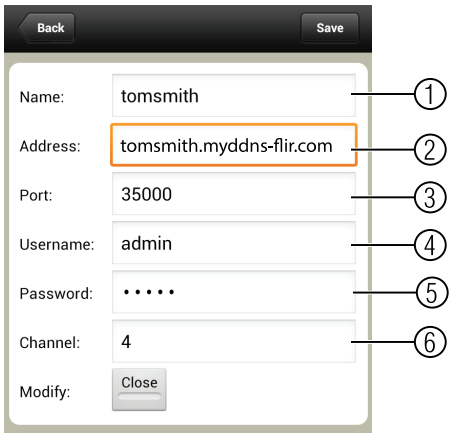
2. Tap **Device Manager**.



3. Tap **Add>Manually Add**.



4. Configure the following:



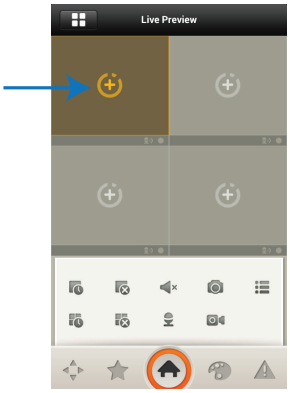
   4.1. **Name**: Enter a name for your system of your choice.
   4.2. **Address**: Enter your DDNS address (e.g. *tomsmith.myddns-flir.com*).
   4.3. **Port**: Enter the Client Port (default: **35000**).
   4.4. **Username**: Enter the system's User Name (default: **admin**).
   4.5. **Password**: Enter the system's Password (default: **000000**).
   4.6. **Channel**: For NVRs, enter the number of channels your NVR has. For IP cameras, enter **1**.

5. Tap **Save**.

6. Tap .

7. Tap **Live Preview**.

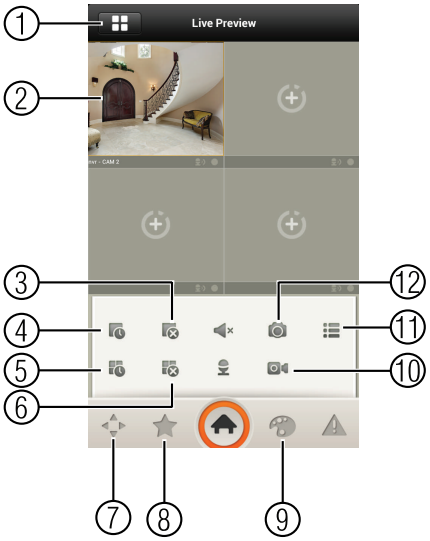
8. Tap **+** on one of the display areas and select the camera you would like to open in the selected display area.



9. Repeat to view additional cameras.

17.3.4 Live View Interface

You can use FLIR SyncroIP NVR in portrait and landscape mode.



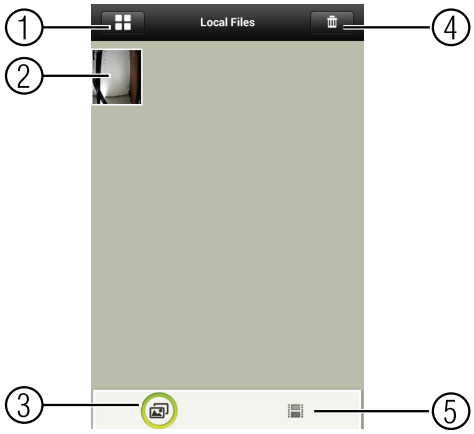
1. **Back**: Return to Main Menu.
2. **Display area**: Double-tap to open a channel in full screen.
3. **Disconnect**: Disconnect from camera.
4. **Connect**: Connect to camera.
5. **Connect all**: Connect to all previously added cameras.
6. **Disconnect all**: Disconnect from all cameras.
7. **PTZ**: Access PTZ controls (PTZ camera required).
8. **Access Favorites.**
9. **Open image settings.**
10. **Manual record**: Tap to start/stop manual recording.
11. **Change camera.**
12. **Snapshot.**

17.3.5 Viewing Snapshots and Videos with Local Files

If you have saved snapshots or videos using the app, you may open them with Local Files.

To access Local Files:

- From the Main Menu, tap **Local Files**.



1. **Back**: Return to Main Menu.
2. **Files**: Tap to open files.
3. **Open snapshots.**
4. **Delete all files.**
5. **Open videos.**

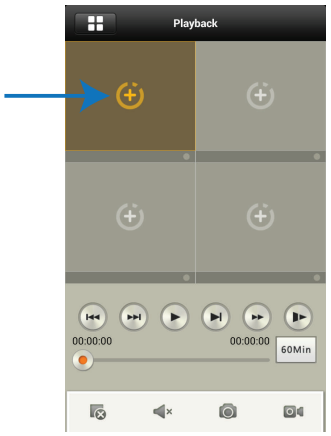
17.3.6 Using Playback Mode on Android Phones

You can access recorded video on your system using your Android phone.

Note
You must enable Sub Stream Recording to use playback mode on mobile devices. For details on enabling Sub Stream Recording, see 14.4.6 *Record*, page 47.

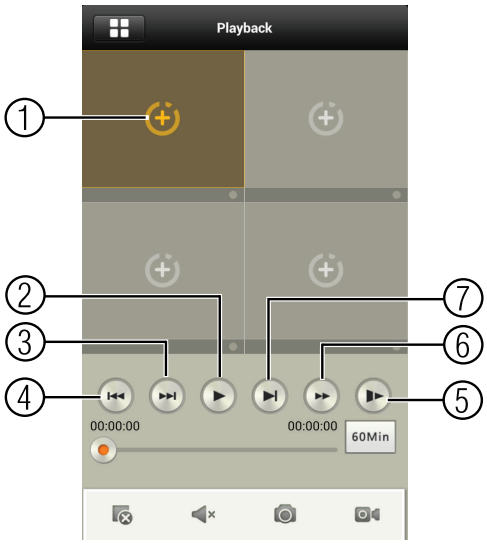
To use Playback Mode:

1. From the Main Menu, tap **Playback**.
2. If Playback is not shown, tap **Add**, check Playback, and return to the Main Menu.
3. Tap **+** and select a channel to playback.



4. Select the date then the start and end times to playback.
5. Use the on-screen controls to control playback.

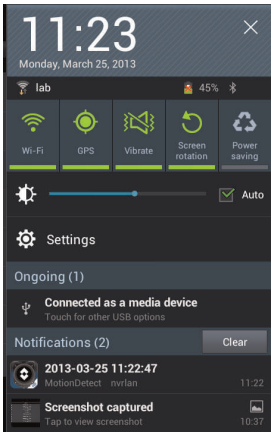
Playback Controls



5.1. **Display area**: Double-tap to open in full-screen.
5.2. **Play/pause.**
5.3. **Next**: Select next video file.
5.4. **Previous**: Select previous video file.
5.5. **Slow.**
5.6. **Fast.**
5.7. **Next frame.**

17.3.7 Enabling Push Notifications

You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video from the camera that detected motion.



Note
Your cameras must have motion detection activated to receive push notifications. For details on enabling motion detection, see “14.2.14 *Motion*, page 38.

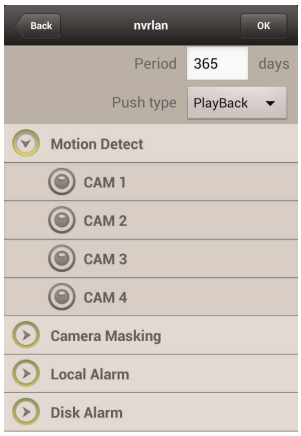
To enable Push Notifications:

1. From the Main menu, tap **Push Config**.

> **Note**
> If Push Config is not shown, tap **Add**, check **Push Config**, and then return to the Main Menu.

2. Tap the system you would like to configure.

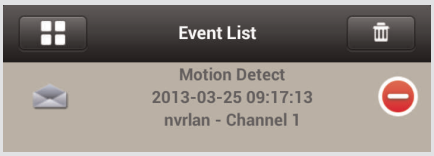
3. Tap **Motion Detect** and then check each channel you would like to receive push notifications from.



4. Tap **OK**. A test notification will be sent to your device. After this, whenever the selected cameras detect motion, you will receive a notification.

Note

You can see a list of notifications through the Event List menu. To show the Event List menu, tap Add and check Event List. Return to the Main Menu and select Event List. Tap on events to view live video from the camera.



17.3.8 Device Manager

You can use Device List to manage your systems.

To access Device List:

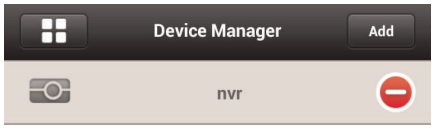
- From the Main Menu, tap **Device Manager**.

To edit a system:

1. Tap the system in Device Manager.
2. Edit the connection details as needed.
3. Tap **Save**.

To delete a system:

1. Swipe the system you would like to delete to the right.
2. Tap **Delete**. Tap **OK** to confirm.



17.4 Android Tablets

FLIR SyncroIP NVR HD is an app that allows you to remotely view your system on an Android tablet.

17.4.1 System Requirements

- Android 3.3 or later.

17.4.2 Prerequisites

- Port **80** and **35000** (or your HTTP and Client Ports, if you have changed them) must be port forwarded on your router to your NVR's IP address.
- You must create a DDNS account, and have the DDNS settings configured in your NVR or IP camera.
- The system must have internet access.
- You must have a DDNS address to log in remotely.

17.4.3 Connecting to your NVR on an Android Tablet

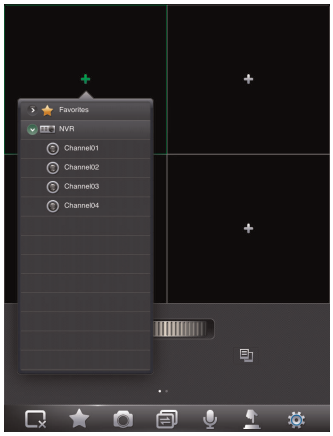
1. Install FLIR SyncroIP NVR HD for free from the Google Play Store.
2. Tap on the FLIR SyncroIP NVR HD icon ( ) to start the app.
3. Tap then .

4. Tap **Device Manager**.

5. Tap **Add**.
6. Configure the following:

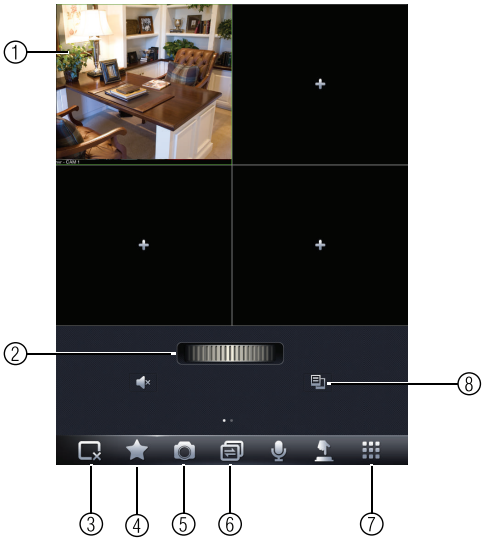
   6.1. **Name**: Enter a name for your system of your choice.
   6.2. **Address**: Enter your DDNS address (e.g. *tomsmith.myddns-flir.com*).
   6.3. **Port**: Enter the Client Port (default: **35000**).
   6.4. **Username**: Enter the NVR's User Name (default: **admin**).
   6.5. **Password**: Enter the NVR's Password (default: **000000**).
   6.6. **Channel Amount**: For NVRs, enter the number of channels your NVR has. For IP cameras, enter **1**.

7. Tap **Save**.
8. Tap .
9. In landscape mode, tap a channel and then select the camera you would like to view on the left. In portrait mode, tap **+** on one of the display areas and select the camera you would like to open.



17.4.4 Live View Interface

You can use FLIR SyncroIP NVR HD in landscape or portrait mode.



1. **Display area**: Double-tap to open camera in full screen.
2. **Favorites**: Slide to select favorites.
3. **Disconnect all**: Disconnect all cameras.
4. **Add to favorites**: Add the current view to favorites.
5. **Shapshot.**
6. **Change display view.**
7. **Open menus.**
8. **Select different camera.**

17.4.5 Device Manager

Device Manager allows you to manage your systems.

To access Device Manager:

1. From live view, tap then .
2. Tap **Device Manager**.

To delete a system:

1. Tap the system to select it.
2. Tap . Tap **OK** to confirm.

To modify a system:

1. Tap a system to select.
2. Tap the system again to open the edit screen.
3. Update the connection details as needed and then tap **Save**.

17.4.6 Using Playback Mode on Android Tablets

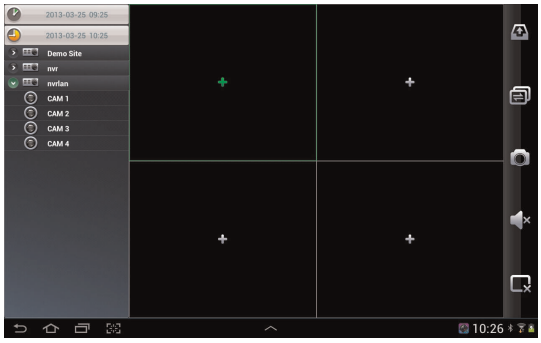
You can access recorded video on your system using your Android tablet.

Note
You must enable Substream Recording to use playback mode on mobile devices. For details on enabling Substream Recording, see 14.4.6 *Record*, page 47.

To use Playback Mode:

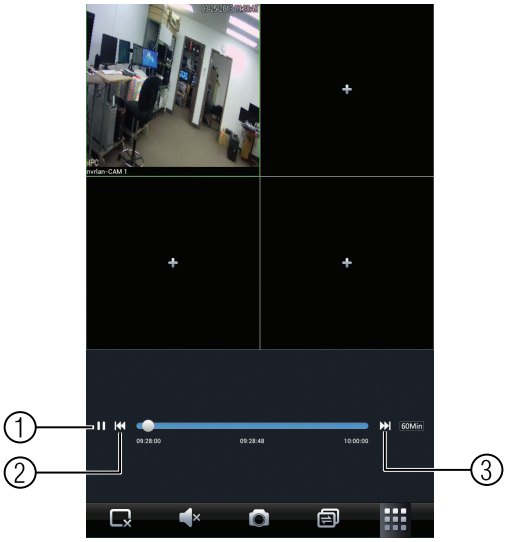
1. From Live View tap then .
2. In Portrait Mode: Tap **+,** select the start time and end time for your search, and select the camera you would like to playback.
   OR

   In Landscape Mode: Select the start time and end time for your search, and select the camera you would like to playback.



3. Use the playback controls.

Playback Controls

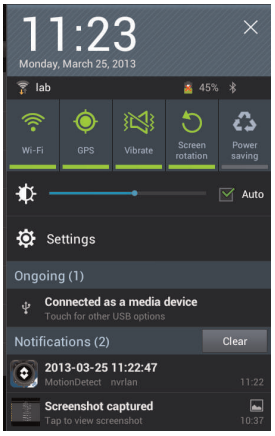


1. **Play/pause.**
2. **Previous file.**
3. **Next file.**

Note
Playback controls are only shown in portrait mode.

17.4.7 Enabling Push Notifications

You can have the app send push notifications to the notifications area on your device when one of your cameras detects motion. Once you have received a push notification, you can select it to open live video from the camera that detected motion.

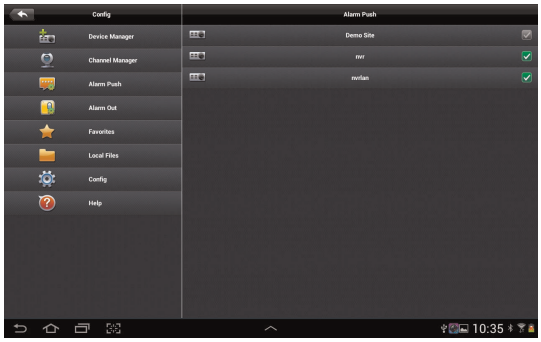


Note
Your cameras must have motion detection activated to receive push notifications. For details on enabling motion detection, see 14.2.14 *Motion*, page 38.

To enable Push Notifications:

1. From live view, tap then .

2. Tap **Alarm Push**.
3. Select the system you would like to configure.

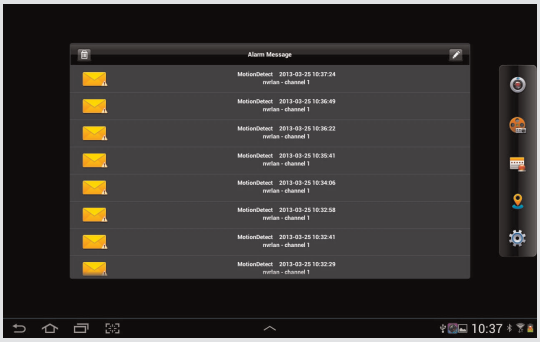


4. Tap **MotionDetect** then check each channel you would like to receive push notifications from.

5. Tap **OK**. A test notification will be sent to your device. After this, whenever the selected cameras detect motion, you will receive a notification.

Note

You can see a list of notifications through the Event List menu. To show the Event List menu, from live view, tap then .



18 Setting up Remote Viewing

Setting up the Remote Viewing Feature requires several steps. Networking skills are required to correctly configure the remote viewing functions.

18.1 What Do I Need?

- NVR System.
- A PC with the installed CMS software.

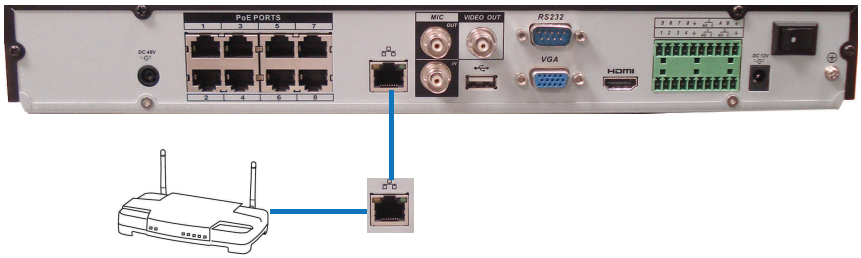
> **Note**
> For Mac users, please visit www.flirsecurity.com/pro for instructions.

- A router (not provided with the system) and High Speed Cable or DSL Internet Connectivity (for remote viewing outside your network).

18.2 Network Setup / Remote Access Overview

To setup remote viewing:

1. With the system powered off, connect the system to the router using an Ethernet cable.



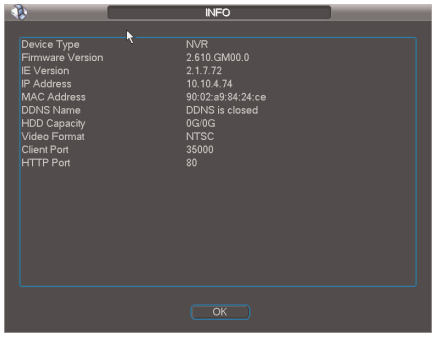
2. Power the system on.
3. Press the **Enter** button on the remote control or front panel to find your system's IP address.
4. Enable Port Forwarding on your router for the Client (default: **35000**) and HTTP Ports (default: **80**). To set up port forwarding, use the included Auto Port Forwarding Wizard software (19 *Auto Port Forwarding Wizard*, page 104) or refer to your router manufacturer's instruction
5. Setup an account at http://ddns.myddns-flir.com. For details, 20 *Setting Up DDNS Service*, page 111.

18.3 Finding your IP Address and MAC Address

The IP and MAC address of your system are necessary for DDNS setup. DDNS allows you to view and control your system from a remote location.

To find your IP and MAC address:

- Press **Enter** on the remote control or front panel.
- Left-click to open the Navigation Bar. Login if prompted. Click to open the System Info screen.



18.3.1 Finding Your External IP Address

If you wish to find your external IP address, you can type **what is my ip address** into Google or use a third-party website such as http://whatismyip.org.

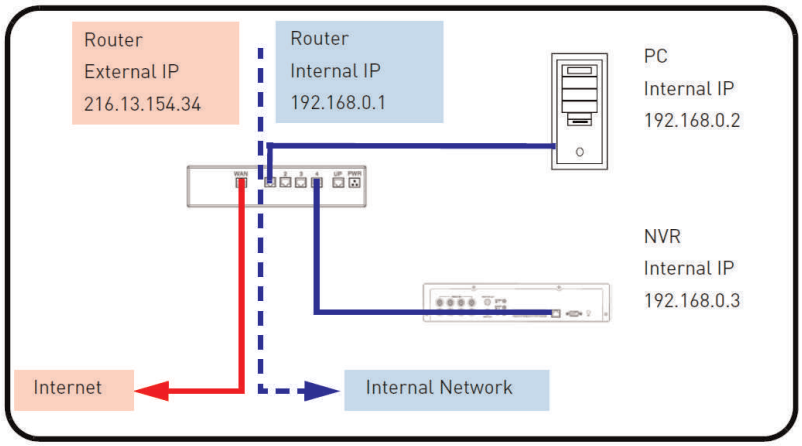
Your external IP address can also be found within your router settings. Refer to your router's user guide for further details.

18.3.2 Enabling Port Forwarding

You need to enable port forwarding on your router to allow for external communications with your system for the following ports:

- **80** (HTTP Port).
- **35000** (Client Port).

Network Example



When a computer on the Internet needs to send data to your internal network, it sends this data to the external IP address of the Router. The Router then needs to decide where this data is to be sent to. This is where setting up Port Forwarding becomes important.

Port Forwarding tells the router which device on the internal network to send the data to. When you set up port forwarding on your Router, it takes the data from the external IP address:port number and sends that data to an internal IP address:port number (i.e. Router External IP 216.13.154.34:80 to NVR Internal IP 192.168.0.3:80).

Please see resources available at www.flirsecurity.com/pro for more assistance with port forwarding.

19 Auto Port Forwarding Wizard

The Auto Port Forwarding Wizard is an exclusive software that easily automates router port forwarding. Before setting up a DDNS account, it is recommended to run the Auto Port Forwarding Wizard to port forward the required ports.

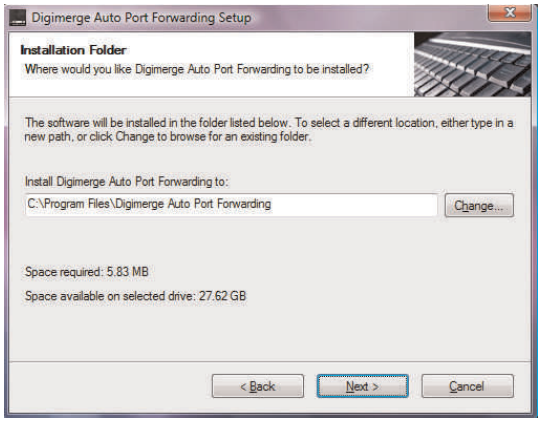
19.1 Installation

To install the Auto Port Forwarding Wizard:

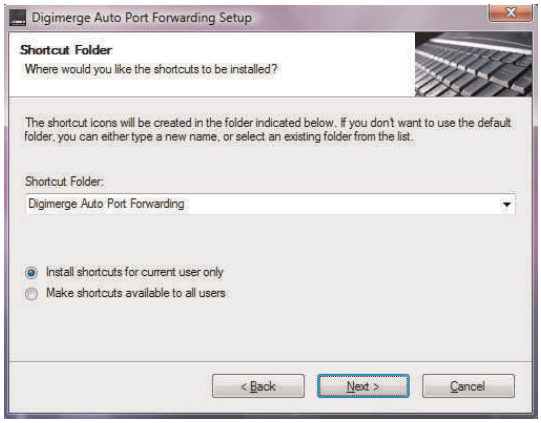
1. Download the Auto Port Forwarding Wizard from www.flirsecurity.com/pro and run the installer file.
   - The installation window opens.
2. Click **Next** to continue.

Digimerge Auto Port Forwarding Setup
Welcome
Welcome to the installer for Digimerge Auto Port Forwarding 1.0.0.
It is strongly recommended that you exit all Windows programs before continuing with this installation.
If you have any other programs running, please click Cancel, close the programs, and run this setup again.
Otherwise, click Next to continue.
< Back
Next >
Cancel

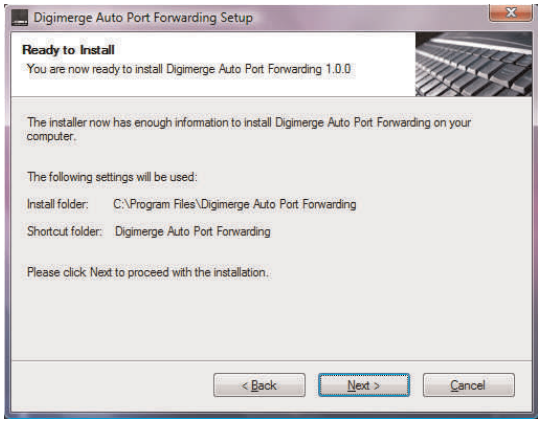
3. Click the **Change** button to change the default installation directory (optional). Click the **Next** button to continue.


Digimerge Auto Port Forwarding Setup
Installation Folder
Where would you like Digimerge Auto Port Forwarding to be installed?
The software will be installed in the folder listed below. To select a different location, either type in a new path, or click Change to browse for an existing folder.
Install Digimerge Auto Port Forwarding to:
C:\Program Files\Digimerge Auto Port Forwarding
Change...
Space required: 5.83 MB
Space available on selected drive: 27.62 GB
< Back
Next >
Cancel

4. Select the users who can see the Auto Port Forwarding shortcut (Optional). Click the **Next** button to continue.


Digimerge Auto Port Forwarding Setup
Shortcut Folder
Where would you like the shortcuts to be installed?
The shortcut icons will be created in the folder indicated below. If you don't want to use the default folder, you can either type a new name, or select an existing folder from the list.
Shortcut Folder:
Digimerge Auto Port Forwarding
Install shortcuts for current user only
Make shortcuts available to all users
< Back
Next >
Cancel

5. Click the **Next** button and then click **Finish** to complete the software installation.


Digimerge Auto Port Forwarding Setup
Ready to Install
You are now ready to install Digimerge Auto Port Forwarding 1.0.0
The installer now has enough information to install Digimerge Auto Port Forwarding on your computer.
The following settings will be used:
Install folder: C:\Program Files\Digimerge Auto Port Forwarding
Shortcut folder: Digimerge Auto Port Forwarding
Please click Next to proceed with the installation.
< Back
Next >
Cancel

6. Double-click the Auto Port Forwarding shortcut ( ) from your desktop to start the program.

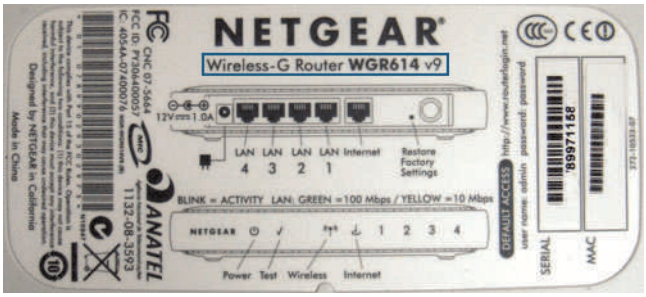
19.2 Configuration

You must have the following before you configure the software:

1. Your router's model number and version number
2. Your router's user name and password.
3. Your device's IP address.
4. Your device's port numbers that require port forwarding.

19.2.1 Obtaining Your Router Model Number and Version

On most routers, the model and version number can be found underneath the router, printed on a sticker.


NETGEAR
Wireless-G Router WGR614 v9
LAN 4 LAN 3 LAN 2 LAN 1 Internet
Restore Factory Settings
BLINK = ACTIVITY LAN: GREEN = 100 Mbps / YELLOW = 10 Mbps
Power Test Wireless Internet
DEFAULT ACCESS
SERIAL
MAC

- **WGR614** refers to the model number.
- **v9** refers to the version number.

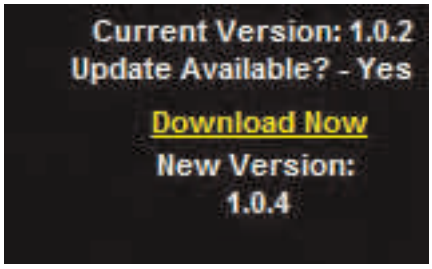
Note
It is recommended to upgrade your router to the latest firmware available from your router manufacturer before running the Auto Port Forward Wizard software. Check the website for your router's manufacturer for details.

19.2.2 Initial Startup: Select Language

1. Click the **Language** drop-down menu and select a language (English, French, Spanish). Click the **Start** button to continue.

DIGIMERGE | Right for Business - Auto Port Forwarding
Powered By PcWinTech.com
www.digimerge.com
Current Version: 1.0.0
Update Available? - No
WELCOME
Network set up is as easy as 1-2-3 with Digimerge Auto Port Forwarding. It makes router configurations simple.
Choose Language:
English | English
Start

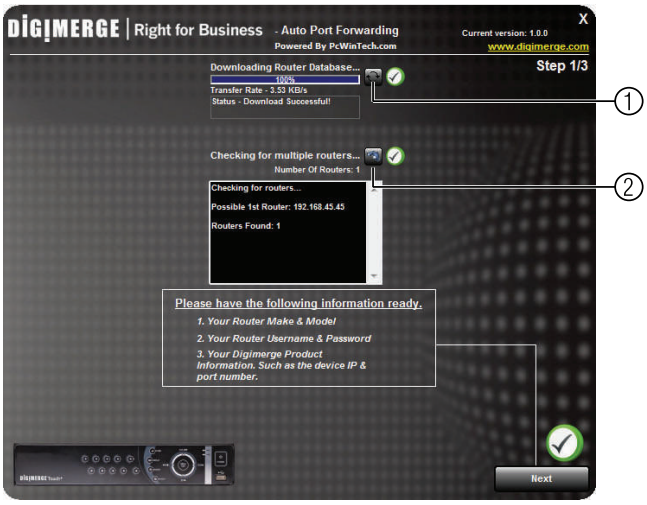
2. If software updates are available, click the **Download Now** button in the top-right corner. A software update includes an updated list of routers compatible with the Auto Port forwarding Wizard.



   - Run the update file and install the latest version of the software.

19.2.3 Step 1: Populate the Router Database

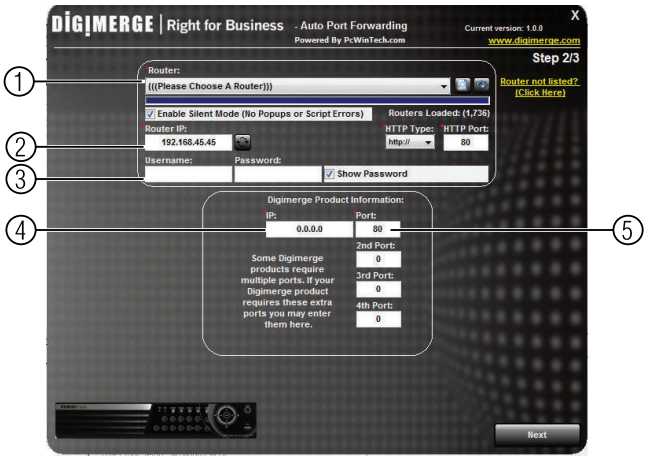
The Auto Port Forwarding Wizard automatically populates a list of current routers, and detects the number of connected routers.


DIGIMERGE | Right for Business - Auto Port Forwarding
Powered By PcWinTech.com
Current version: 1.0.0
www.digimerge.com
Step 1/3
Downloading Router Database...
100%
Transfer Rate - 3.53 KB/s
Status - Download Successful!
Checking for multiple routers...
Number Of Routers: 1
Checking for routers...
Possible 1st Router: 192.168.45.45
Routers Found: 1
Please have the following information ready.
1. Your Router Make & Model
2. Your Router Username & Password
3. Your Digimerge Product Information. Such as the device IP & port number.
Next
1
2

1. (Optional) Click to refresh the router database.
2. (Optional) Click to check for multiple routers.
3. Click the **Next** button after the software detects your router configuration.

> **Note**
> If more than one router is detected, you may need to contact your ISP (Internet Service Provider to port forward. For details on configuring multiple routers, see 19.2.7 *Configuring Multiple Routers*, page 109.

19.2.4 Step 2: Enter your Router Settings



1. Under the **Router** drop-down list, select the model of your router.

   - Click the **Search** button ( ) to enter the name of your router model.

   Note

   You can click the **Auto Detect** button ( ) if you have a Linksys or Netgear router (works with most Linksys or Netgear models).

2. Under Router IP, click the **Detect Router IP** button ( ).
   - The router's IP populates in the blank field. Click **OK** to exit the prompt.
3. Under **Username** and **Password**, enter *the router's* username and password.

   Note
   The HTTP Type (default http://) and HTTP Port fields refer to the port and protocol used to access your router's configuration web page. You may need to change the values depending on your router model. Consult your router manual for details.

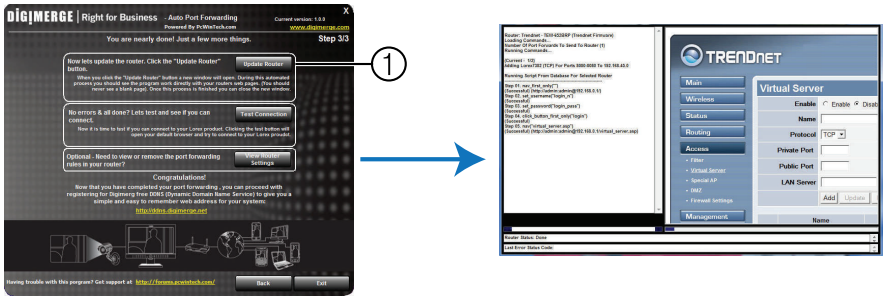
4. Under **IP**, enter the IP address of your device.

   Note
   The IP is usually found in the information window of your system.

5. Under **Port**, enter the system's HTTP Port (by default, port **80**).
   Under **2nd Port**, enter the system's Client Port (by default, port **35000**).
6. Click **Next** to continue.

19.2.5 Step 3: Update the Router Settings

1. Click the **Update Router** button.
   - You will see your router window open. The Auto Port Forwarding Wizard automatically populates your router with the relevant information. This will take a few moments.



2. Close the update window when the update finishes.

19.2.6 Step 4: Test your Connection

1. Click the **Test Your Connection** button.
   - Your system's default browser opens and connects to your device.

Note

- Ensure that Internet Explorer is your system's default Internet browser.
- A window opens that prompts you to enter in your sytem's user name and password (do not enter your DDNS log in information).
- ActiveX warnings may appear. Accept all ActiveX installation warnings to connect to your system.

19.2.7 Configuring Multiple Routers

Your network may have two or more connected routers. During the initial launch of the auto port forwarding wizard, the program scans the network to detect the number of connected routers.

To check for multiple routers:

Click the Detect Multiple Routers button ( ). A list of connected routers populates in the window.

- The "Possible 1st Router" refers to the router directly connected to your system. This is the router that requires the port forward information.
- The "Possible 2nd Router" refers to the router immediate to the internet connection. This is the router that requires you to configure a DMZ host connection.

Scenario A: Router/Modem Combination + Router

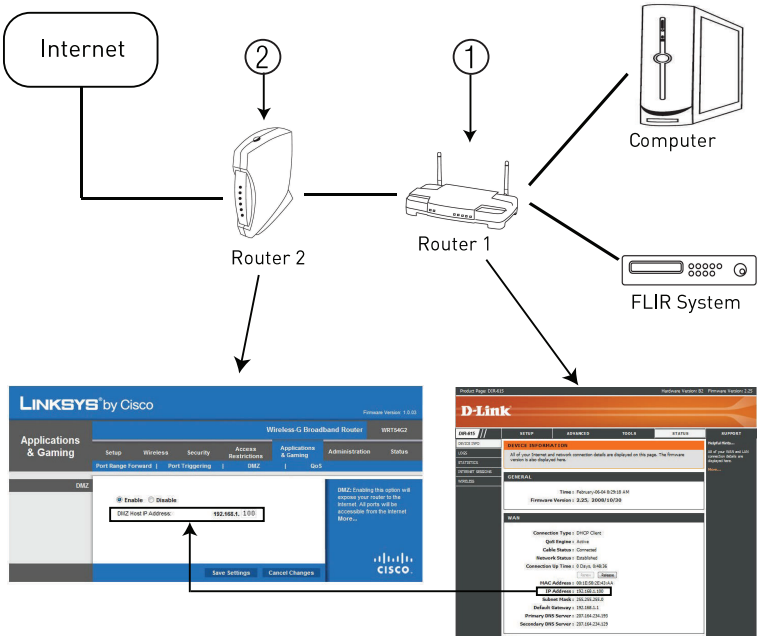
- You may have a router/modem combination, with a second router in your network.

Scenario B: Multiple Routers

- You may have two routers in your network.
  In both scenarios, the router that is immediate to the internet connection (Router 2 in illustration below) must act as a "bridge" to another router (Router 1 in illustration). The Auto Port Forwarding Wizard must connect to Router 1.

A proper DMZ configuration in Router 2 allows all incoming traffic going it to automatically pass to Router 1. Router 2 acts as a "dummy" router and passes all the incoming data onto Router 1. Router 1 is the router that needs the port forwarding information.

Configuring a DMZ Host Connection



1. Find the public IP address of Router 1: Connect to "Router 1" on your network (referred to as "Possible 1st Router" in the Auto Port Forwarding Wizard). Obtain the IP address of Router 1. Usually this can be found in the "Status" section of your router menu. The IP should begin with "192.168....".

   Note
   The "Status Page" of a router normally includes the router's vital information such as the IP address. The IP information is normally under a header called "WAN" or "Internet Port". Each router has different terminology.

2. Set up Router 2 as DMZ Host: Enter the IP address obtained in the previous step into the DMZ section of Router 2.
3. Once you have configured Router 2 with a DMZ connection, run the Auto Port Forwarding Wizard to set up port forwarding on Router 1.

Note
Consult your router's owner's manual for details on configuring DMZ settings.

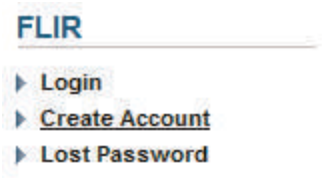
20 Setting Up DDNS Service

FLIR offers a free DDNS service for use with your system. A DDNS account allows you to set up a web site address that points back to your local network. The following outlines how to set up your free DDNS account.

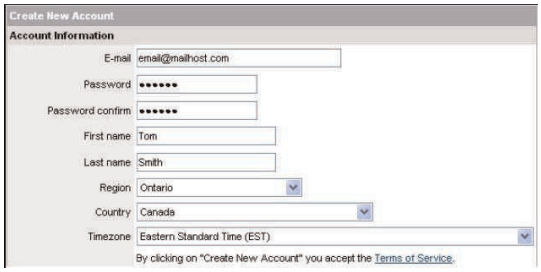
20.1 Registering for FLIR DDNS Service

To setup your free FLIR DDNS account:

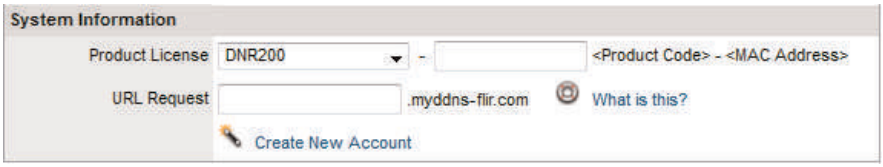
1. In your browser, go to http://ddns.myddns-flir.com and click **Create Account**.



2. Complete the **Account Information** fields with your personal information. Complete the **Warranty Information** with your purchase details (optional).



3. Complete the System Information fields:
   - **Product License**: Select your product model from the Product License drop down menu (i.e. DNR300 Series).
   - **<Product Code> - <MAC Address>**: Enter the MAC address of your NVR. To find the MAC address, see 18.3 *Finding your IP Address and MAC Address*, page 102.
   - **URL Request**: Choose a URL for your DDNS connection (i.e. your name, your company or business name, or anything of your choice).



4. Click **Create New Account**.
5. Your account information will be sent to you at the email Address you used in Step 2. You will need this information for remote access to your system. Record your information below:

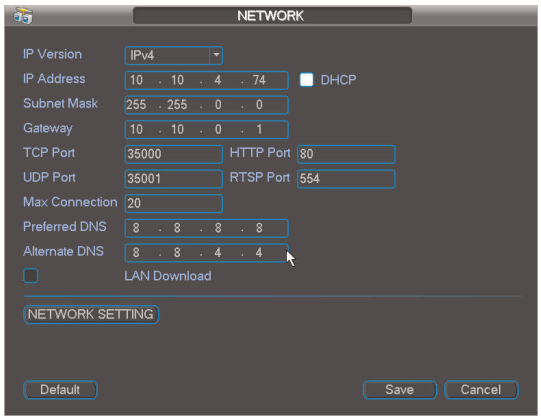
User name:
Domain name*:
Password:

20.2 How Do I Enable DDNS On My System?

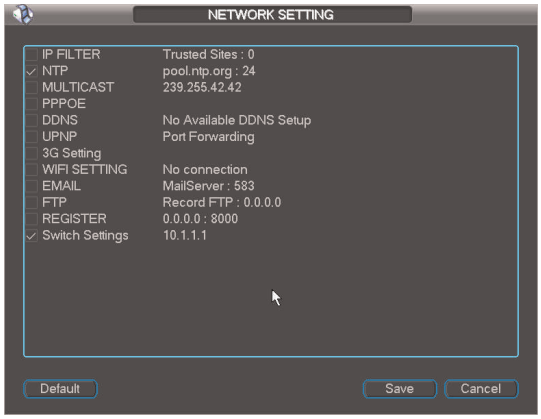
Once you have registered for free DDNS service, use the information in the confirmation email to configure DDNS settings on your system.

To enable DDNS on your system:

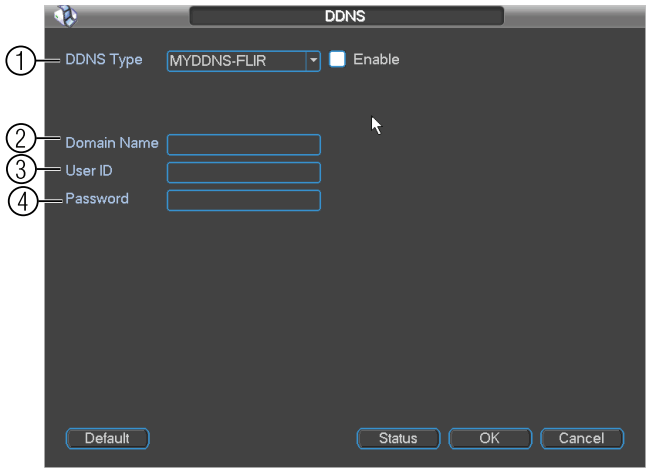
1. In live view, right-click and then click Main Menu. Login using the admin account if prompted (default user name is **admin** and default password is **000000**).
2. Click **Setting>Network**.
3. Click **Network Setting**.



4. Check **DDNS**.
5. Double-click **DDNS**.



6. Configure the following:



   6.1. Ensure **Enable** is checked. The checkbox will be white when DDNS is enabled.
   6.2. Under **Domain Name**, enter the Domain Name from the confirmation email you received after registering for DDNS.
   6.3. Under **User ID**, enter the User Name from the confirmation email.
   6.4. Under **Password**, enter the Password from the confirmation email.
7. Click **OK**.
8. Click **Save**.

> **Note**
> It may take between 10~15 minutes for the DDNS server to update with your new DDNS address.

20.3 Connecting to your system using DDNS

> **Note**
> You must port forward ports on your router to NVR's IP address (by default, ports **35000** and **80**) to connect to your system over the Internet.

Now that you have set up your system for DDNS, use the following address formats to connect:

20.3.1 CMS Software or Mobile Apps

Example DDNS address to connect using CMS or app
tomsmith.myddns-flir.com

- For details on the CMS Software, 15 *FLIR SyncroIP NVR CMS Central Management Software*, page 54.
- For details on mobile apps, 17 *Mobile Connectivity*, page 77.

20.3.2 Internet Explorer

Example DDNS address to connect using IE
http://tomsmith.myddns-flir.com:80

- For details, 16 *Remote Viewing On Internet Explorer*, page 73.

21 Remote Firmware Upgrade

To perform a firmware upgrade over the LAN or Internet, a Config Tool is provided on the CD or www.flirsecurity.com/pro. In an effort to continuously improve the functionality of our products, firmware upgrades are available as a free download on our website, as they are released.

Note
The Config Tool is supported on PC only. You may also upgrade the firmware using the system's local menus (see 14.1.4 *Version (Updating Firmware)*, page 28).

21.1 Installing a Firmware Upgrade Over the LAN

Prerequisites:

- Connect your NVR or IP camera to a router or switch on your network.
- Download a firmware upgrade from www.flirsecurity.com/pro, if one is available. Extract the contents.

To perform a firmware upgrade over the LAN:

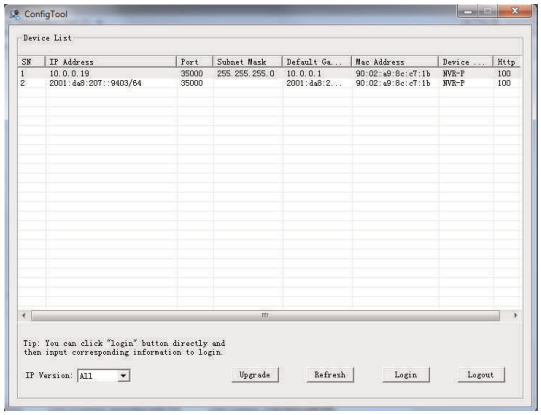
1. Download the Config Tool from www.flirsecurity.com/pro.
2. Extract the contents into a folder.
3. Open the folder and right-click **ConfigTool.exe** and select **Run as administrator**.

   Note
   If a Windows Firewall warning appears, click Allow Access.

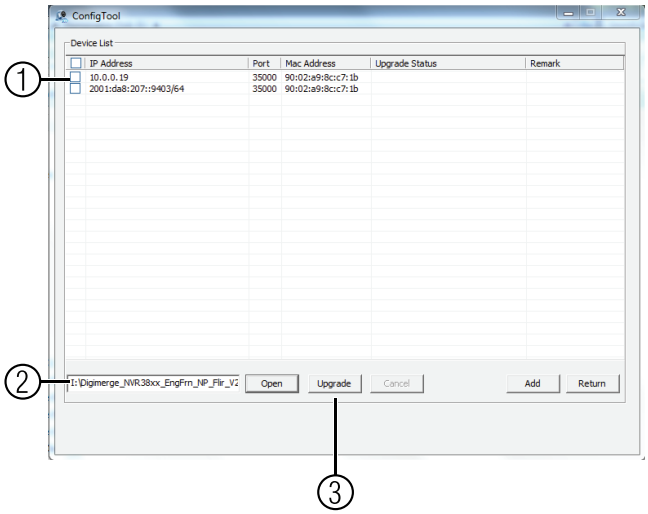
   The Config Tool scans your LAN for NVRs and IP cameras.

   Note
   Firmware versions are different between NVRs and IP cameras.

4. Click **Upgrade**.



5. Configure the following:



5.1. Check any NVRs or IP cameras you would like to upgrade.
5.2. Click **Open**. Select the upgrade firmware file (.bin).
5.3. Click **Upgrade**. Wait for the upgrade to complete. Do not power off the system or disconnect the power cable during upgrade. The system will restart when the upgrade is complete.

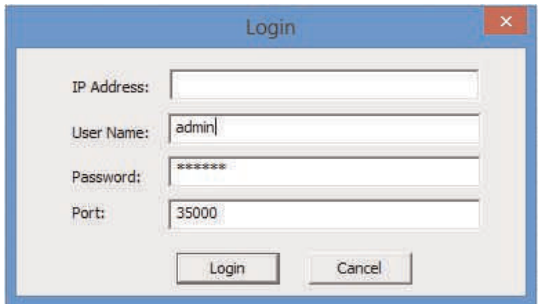
21.2 Installing a Firmware Upgrade Over the Internet

Prerequisites:

- Port forward the Client Port (default: **35000**) on the system's local router.
- Obtain the public IP address of the system.
- Download a firmware upgrade from www.flirsecurity.com/pro, if one is available. Extract the contents.

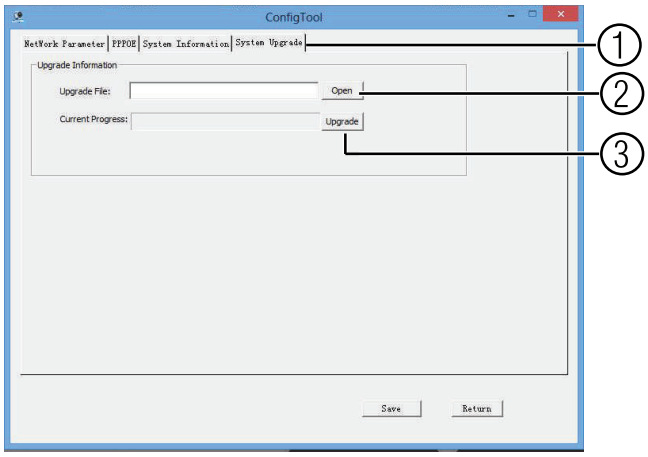
To perform a firmware upgrade over the Internet:

1. Download the Config Tool from www.flirsecurity.com/pro.
2. Extract the contents into a folder.
3. Open the folder and right-click **ConfigTool.exe** and **Run as administrator**.
4. Click **Login**.
5. Under **IP Address**, enter the public IP address of the system. Edit the User Name, Password, or Port if these have been changed from the default values.



6. Click **Login**. The Config Tool logs in to the system.

7. Configure the following:



7.1. Click **System Upgrade**.
7.2. Click **Open**. Select the firmware file (.bin).
7.3. Click **Upgrade**. Wait for the upgrade to complete. Do not power off the system or disconnect the power cable during upgrade. The system will restart when the upgrade is complete.

22 DNR300 Series Hard Drive Installation

The system comes with one or more pre-installed 3.5" SATA hard drives. You can install up to two hard drives up to a maximum size of 3TB each (for a maximum total storage of 6TB).

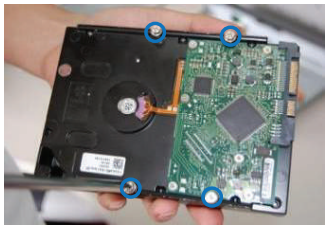
22.1 Installing a Hard Drive

⚠ CAUTION
Make sure that the system is OFF and ALL power adapters have been disconnected before removing/installing the hard drive.

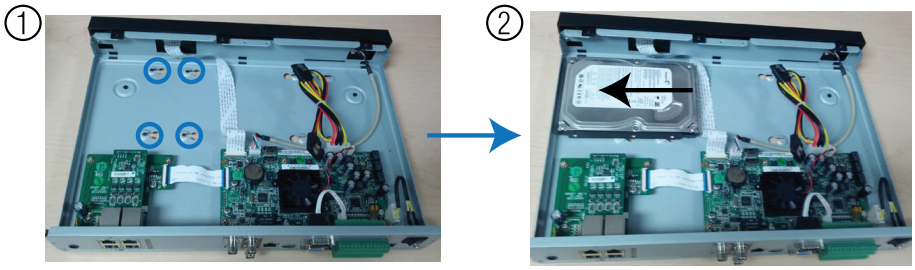
To remove the hard drive:

1. Power off the system, and unplug all cabling from the system.
2. Remove the screws (4x) from the back panel. Slide the cover back and up to remove.

3. Insert hard drive screws (4x) on the hard drive and tighten them half way.



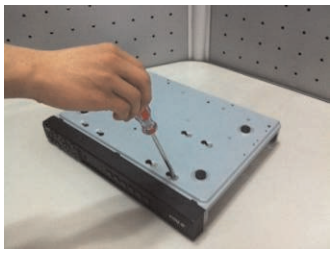
4. Place the HDD into the NVR.



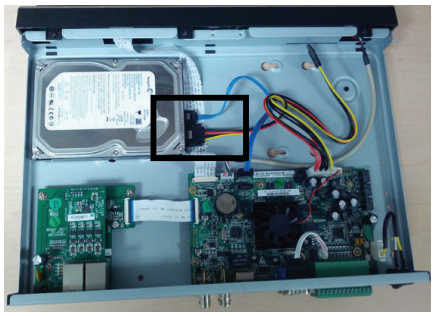
4.1. Place the hard drive over one set of screw holes on the bottom panel with the SATA power and data connectors facing the middle of the unit.

4.2. Slide the hard drive into place.

5. Turn the unit over and tighten the hard drive screws.



6. Turn the unit back over and connect the SATA power and data cables to the hard drive.



7. Replace the cover and cover screws. Make sure to slide the lip on the cover under the bottom of the front panel.

Note
After installation, you must format the hard drive in order to use it with the system. See 22.3 *Formatting Hard Drives*, page 119.

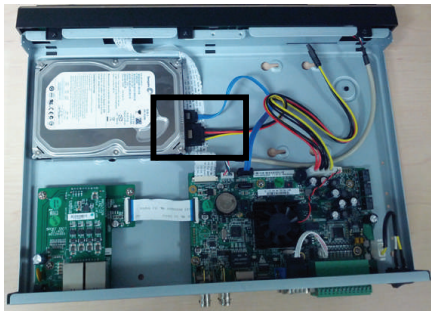
22.2 Removing the Hard Drive

CAUTION

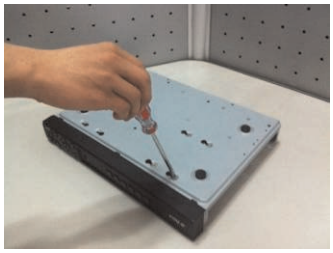
Make sure that the system is OFF and ALL power adapters have been disconnected before removing/installing the hard drive.

1. Power off the system, and unplug all cabling from the system.
2. Remove the screws (4x) from the back panel. Slide the cover back and up to remove.

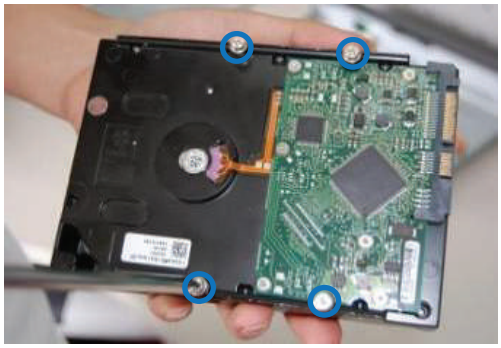
3. Remove the SATA power and data cables from the hard drive.



4. Turn the unit over and loosen the hard drive screws. Do not remove the hard drive screws.



5. Turn the unit back over and remove the hard drive from the case.
6. Remove the hard drive screws from the hard drive.



7. Replace the cover and cover screws. Make sure to slide the lip on the cover under the bottom of the front panel.

22.3 Formatting Hard Drives

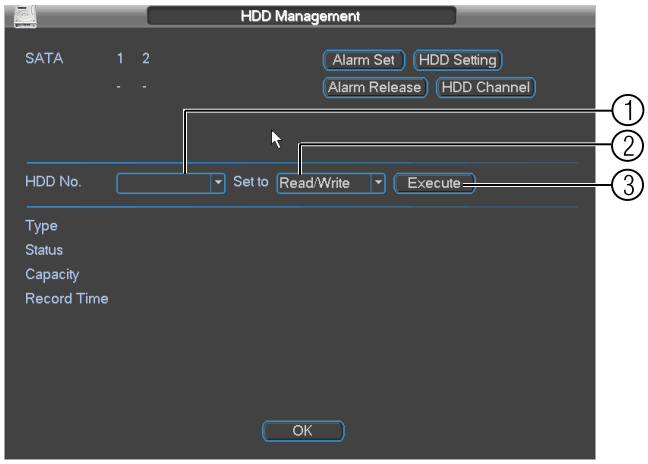
You must format hard drives before you may use them with the system.

⚠ **CAUTION**
Formatting the HDD erases all data on the hard disk. This step cannot be undone. System settings will not be erased.

To format a hard drive:

1. From Live View, right-click and select **Main Menu>Advanced>HDD Management**.

2. Configure the following:



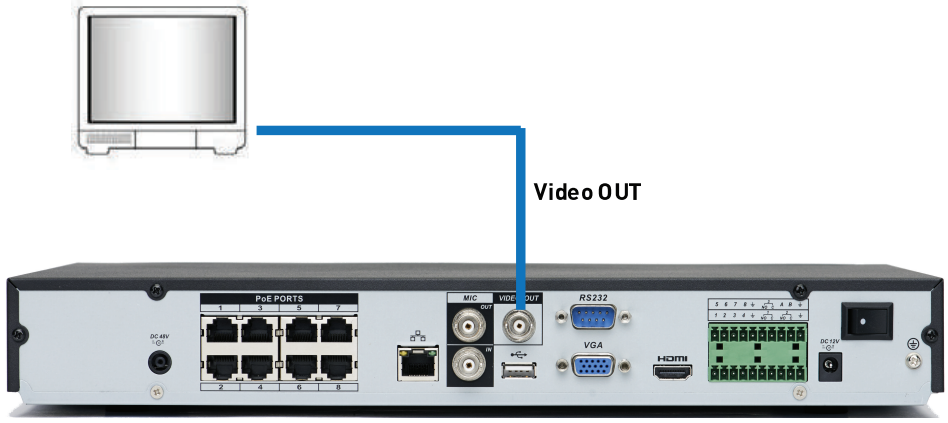
2.1. Under **HDD No.**, select the hard drive you would like to format. Information about the hard drive appears in the lower section of the menu.

2.2. Under **Set to**, select **Format**.

2.3. Click **Apply**. Click **OK** to confirm. Wait for the hard drive to format. Hard drives become Read/Write hard drives by default when formatted.

23 Connecting An External Monitor (DNR300 Series)

A BNC output is available to connect the NVR to an external monitor or TV. The BNC output shows a duplication of the live display.



24 Troubleshooting

When a malfunction occurs, it may not be serious and can be corrected easily. The following describes the most common problems and solutions. Please refer to the following before calling FLIR Technical Support:

Error	Possible Causes	Solutions
• NVR is not receiving power, or is not powering up.	• Cable from power adapter is loose or is unplugged.	• Confirm that all cables are connected correctly. • Confirm that the power adapter is securely connected to the back of the unit.

	• Cables are connected, but NVR is not receiving sufficient power.	• Confirm that the unit is powered on (LED indicators on the front should be ON).
		• If the unit is connected through a power bar or surge protector, try bypassing the bar and connecting the power directly to the wall outlet.
		• Confirm that there is power at the outlet:
		  • Connect the power cable to another outlet.
		  • Test the outlet with another plugged device (such as an electric calculator or phone charger).

• There is no picture on selected channels / camera picture is not being displayed.	• PoE power adapter is not connected.	• Make sure the 48V DC power adapter is connected to the NVR or the cameras will not receive power from the PoE Ports.
	• Camera cables are loose or have become disconnected.	• Disconnect and reconnect the cable at the NVR and at the camera. • Try moving the camera to another channel or use another cable. • If your cameras are not using PoE, make sure they are using the correct power source according to the specifications provided by the manufacturer.
	• Camera/NVR connection to LAN has become interrupted.	• Make sure your cameras are connected to the same LAN as the NVR. • Make sure any routers or switches in between the NVR and IP cameras are powered on.
• Remote control is not detected by the system.	• Batteries in the remote control are drained.	• Install 2 fresh AAA batteries in the remote control.
	• There are no batteries in the remote control.	
• Hard drive is not detected by the system.	• Hard drive cables are loose or not properly connected.	• Remove the housing and check that hard drive cables are firmly connected.
	• Hard drive has not been initialized (formatted) by the system.	• For details, see 22.3 *Formatting Hard Drives*, page 119 .
	• There is no hard drive in the system.	• Open the housing and install a 3.5" SATA hard drive.

Error	Possible Causes	Solutions
• Hard drive is full and the unit is no longer recording.	• Overwrite is not enabled.	• From the Main Menu, select General. Beside HDD Full, select Overwrite. Click OK to save settings. This enables the system to continuously record by overwriting data once the hard drive is full.
• Mouse not detected by system.	• Mouse cable is not firmly connected to the system.	• Firmly connect the mouse cable to the system.
	• Mouse is not connected to the system.	
	• System needs to be reset.	• Re-connect the power cord to restart the system.
• My system does not seem to be recording.	• Recording may be disabled.	• Right-click in live view, and click Record. Ensure that each channel is set to Schedule or Manual. If schedule is selected, make sure schedule settings are correct under Setting>Schedule. **ATTENTION**: For security, it is highly recommended to keep Continuous Recording ON at all times.

24.1 Remote Connectivity Troubleshooting

Error	Possible Causes	Solutions
• Cannot connect to the NVR over the Internet.	• Ports not forwarded.	• Port forward the HTTP port (default: 80) and Client port (default: 35000).
	• DDNS Setup not completed.	• Register for a DDNS account. For details, see 20 *Setting Up DDNS Service*, page 111.
	• Ports are blocked by Internet Service Provider (ISP).	• Some ISP's block port 80. Reassign the HTTP port to anything above 1026. Recomplete port forwarding using the newly assigned port.
	• Multiple routers installed in local network.	• If you have multiple routers, additional setup may be required. For details, see 19.2.7 *Configuring Multiple Routers*, page 109.
• Could connect to system previously, but no longer can.	• NVR internal IP address has changed.	• This can occur if your router resets due to power failure. Set up a fixed IP address for your NVR. For details, see 14.2.7 *Configuring DHCP or Fixed IP Address*, page 33.
• Cannot connect to the NVR using a smartphone or tablet.	• IP address used from outside local network.	• Use the DDNS address to connect to the NVR using a mobile application (e.g. tomsmith.myddns-flir.com).
	• Router is blocking DDNS connection from internal network.	• Turn off WiFi connection and attempt to connect using 3G or mobile network.

25 DNR300 Series System Specifications

25.1 System

Main Processor	Dual-core embedded processor
Operating System	Embedded LINUX
Pentaplex Operation	Simultaneous View, Record, Playback, Backup, and Remote Monitoring

25.2 Inputs/Outputs

IP Camera Input	8 channel / 16 channel
Power over Ethernet (PoE)	8 integrated PoE ports
Audio	1 channel input (BNC), 1 channel output (BNC)
PTZ	RS-485, supports Pelco-D and Pelco-P
USB	2 ports
Alarm Input	8 Channel
Relay Out	3 Channel

25.3 Display

Interface	1 HDMI, 1 VGA, 1 BNC
Resolution	1920×1080, 1280×1024, 1280×720, 1024×768
Display Split	1/4/8/9, 1/4/8/9/16
OSD	Camera Title, Time, Camera Lock, Motion Detection, Recording Status

25.4 Recording

Compression	H.264
Resolution	1080P (1920×1080) / 720P (1280×720)
Record Rate	240FPS @ 1080P / 480FPS @ 1080P
Bit Rate	160Mbps
Record Mode	High Quality Stream/Sub-Stream Recording: Manual, Schedule, Motion Detection, Alarm
Record Interval	1~120 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec

25.5 Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Screen tips
Video Detection	Motion Detection

25.6 Playback and Backup

Sync Playback	1/4/8, 1/4/8/16
Playback Function	8 Channel / 16 Channel
Backup Mode	USB Device / Network
Configuration Backup	To USB Device

25.7 Network

Ethernet	RJ-45 port (10M/100M/1000M)
Network Function	HTTP, TCP/IP, IPv4/IPv6, UPNP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPOE, DDNS, FTP, Alarm Server, IP Search
Max. User Access	20 simultaneous users
Smart Phone	iPhone, iPad, Android
IP Cameras Supported	FLIR, Digimerge, Panasonic, Sony, Dynacolor, Samsung, AXIS, Arecont, Bosch, Canon, Honeywell, Pelco, Panasonic, Vivotek

25.8 Storage

SATA Ports	2 internal SATA ports (2HDD)
Maximum Storage Capacity	6TB (2 x 3TB) internal

25.9 Dimensions

Weight	2.3kg / 5.1lbs
Package Dimensions	438mm x 153mm x 343mm / 17.2” x 6.0” x 13.5” (W x H x D)
Cube	Cube: 0.023 Cubic Meters / 0.81 Cubic Feet

25.10 Power

Power Supply	1x 12V DC 5A (for NVR); 1x 48V DC 1A (for PoE)

As our products are subject to continuous improvement, FLIR Systems, Inc. and its subsidiaries reserve the right to modify product design, specifications, and prices without notice and without incurring any obligation. E&OE

26 Notices

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows the guidelines in this manual to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury.

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

26.1 FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

Website
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